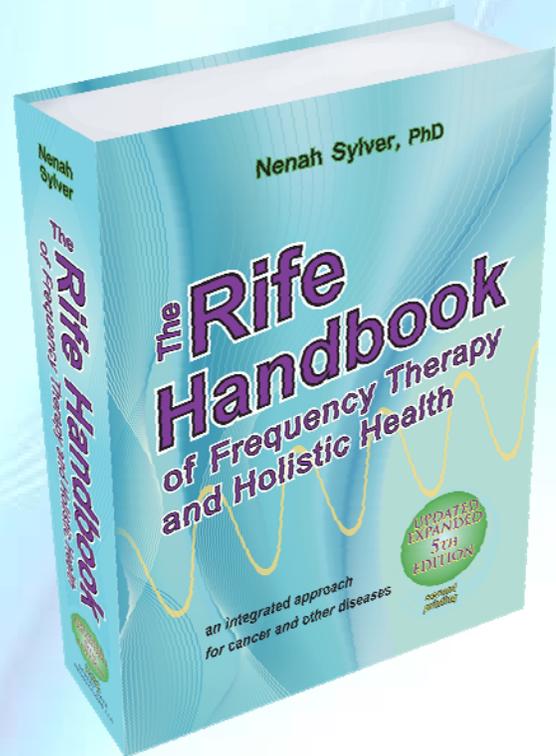


Dr. Nenah Sylver's



Sample Pages

from:

***The Rife Handbook
of Frequency Therapy and Holistic Health***
an integrated approach for cancer and other diseases

5th Edition
second printing

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Nenah Sylver, PhD

The Rife Handbook of Frequency Therapy and Holistic Health

*an integrated approach
for cancer and other diseases*

**UPDATED
EXPANDED
5TH
EDITION**

*second
printing*

Praise for *The Rife Handbook*

Natural therapies and healing have been ridiculed as quackery by the medical-pharmaceutical complex for a century. Yet consumers spend thirty billion out-of-pocket dollars a year on alternative therapies. Why? Not because people are gullible, but because many of these modalities work. Holistic health is complex. It addresses the entire body, all one hundred trillion cells. Supported by abundant research, Nenah Sylver does an amazing job explaining the plethora of options, techniques and technologies that will help readers make informed decisions about how to naturally support their health and innate healing power. Simply put, *The Rife Handbook* is an encyclopedia of holistic health. It's so comprehensive, it's mind boggling. This stellar body of work belongs in every household as well as every practitioner's office.

—Bernard Straile, DC
author of *One Thousand Shades of Pink*
and developer of the IMAET quantum energy wellness equipment

This book is incredibly well written and comprehensive, relevant to students and practitioners alike. Covering an array of topics in medicine and holistic health, it comes at a most crucial time in the burgeoning field of alternative and complementary health care. Having read scores of books on electromedicine, I count this book as my number one reference on the topic. I only wish I had the knowledge presented in these pages many years ago. As a scientist with over forty years of clinical and academic experience, I am mesmerized by Nenah Sylver's quality of writing and knowledge. She explains the most difficult topics clearly so anyone can understand and benefit from what she has to offer. Dr. Sylver is sure to inspire and educate those fortunate enough to hold a copy of her book in their hands. Without question, she will be included as one of the great minds of the 21st century. It is with great pride and honor that I recommend *The Rife Handbook* without hesitation to all physicians and students in the health field.

—John A. Amaro, PhD, DC, LAc, Dipl Med Ac
past president, International Academy of Medical Acupuncture
and developer, Electro Meridian Imaging (EMI)[™] acupuncture diagnostic instrument

In this 5th edition of *The Rife Handbook of Frequency Therapy and Holistic Health*—the definitive work on Rife, resonant frequency, pulsed energies, and related technologies for therapeutic use—Nenah Sylver has set an even higher bar of excellence. She has conveyed so much new and important information in an even more organized and cohesive manner, that this edition is a “must have” even if you enjoyed the previous volume.

Dr. Sylver's unique ability to translate complex information into accessible content, suitable for health professionals and laypersons alike, leave most hard-core technical persons (like myself) in total awe. Her attention to accurate historical detail as opposed to myth, and inclusion of new, cutting-edge complementary healing modalities, allows readers to strategize a practical and effective approach for their often serious health issues. This latest edition empowers the reader by providing a wealth of knowledge compiled, sorted, and refined over the last decade. It offers information that few have time to research for themselves when their health requires it the most. This book is an incredibly valuable resource that everyone needs. If you have but a single reference in your library on the science and practice of these technologies and therapies, *The Rife Handbook* should definitely be the one!

—Jimmie Holman
co-founder, Pulsed Technologies Research (USA)
and Bioenergetics & Pulsed Technologies (EU)

Traditional medicine, with its faulty paradigm and obsolete Neanderthal protocols, is already in a state of decline. In its wake, Integrative Medicine has begun to fill the void with bio-mechanical therapies, electromedicine, and more natural remedies to heal. Keeping up with the many advances is a monumental task.

The previous edition was a first-rate, comprehensive, extremely well organized and documented manual to help laypersons and physicians better understand the concepts of vibrational medicine and the power of complementary health protocols. As an author, researcher and international lecturer with over forty years of clinical experience, I was literally blown away by that masterpiece and gave it a definitive five-star rating. This revised 5th edition of *The Rife Handbook of Frequency Therapy and Holistic Health* is a perfect example of intelligent evolution. Dr. Nenah Sylver has compiled an even more comprehensive holistic bible. In an improved format, it provides frequencies to treat new diseases, plus expanded sections on the politics of medicine and vaccines, more breakthrough complementary therapies, historical electromedicine references, and other topics to help one survive the pitfalls of modern medicine. It's a must for everyone's reference library.

—Gerald H. Smith, DDS, DNM
past president, Holistic Dental Association

Dr. Nenah Sylver has brought together the sciences of bioelectronics and naturopathic health care in a truly integrated approach. *The Rife Handbook* is the bible of holistic medicine for the 21st century.

—Brian McInturff
*creator of the Consolidated Annotated Frequency List (CAFL),
www.electroherbalism.com*

Dr. Nenah Sylver has gifted humanity with a magnificent, comprehensive, thoroughly researched guide to holistic health as well as the science and application of the work of a great medical pioneer, Royal Raymond Rife. This book will help physicians expand their base of practical and theoretical knowledge. I highly recommend it for any clinical practice utilizing complementary and energy medicine therapies.

—Robert S. Ivker, DO
*co-founder and past president, American Board of Integrative Holistic Medicine (ABIHM)
and author of *Sinus Survival**

At a time when health conscious individuals are concerned about drug-resistant infectious diseases, the government's push for mass inoculations, the over-medication of children, bioterrorism, and negative effects of vaccines and drugs, along comes a well researched, easy-to-read treatise that revives non-invasive and effective frequency therapy. *The Rife Handbook* is sophisticated enough for the seasoned health professional, yet thorough and understandable enough for the novice. This book does more than discuss the genius of Royal Raymond Rife; it superbly explains holistic approaches to treating disease. Even if the reader does not (yet) own a frequency device, this book is one of the best primers I have ever seen on holistic health. Anyone interested in alternative healing protocols must have this book.

—Rose Marie Williams, MA
Townsend Letter columnist, and natural health and environmental advocate

This 5th edition of *The Rife Handbook* is huge. Our definition of “handbook” must expand to include the book’s thousand-odd pages—making it a little unwieldy in the field, but absolutely worth keeping at the desk. It’s enormous in scope, but Nenah Sylver eases us into the text by explaining, in the Introduction, the premise under which she operates: “It became clear to me that I couldn’t just create a list of numbers [frequency settings] to go with the equipment . . . it wasn’t enough to receive frequency sessions; [people] had to actively eliminate the conditions that had allowed their illness to occur in the first place.” The end result is truly a comprehensive volume of healing.

Healing invariably makes us think of germs. But as Dr. Sylver writes, “As long as we perceive ourselves as helpless victims of germs, we’ll continue to rely on pharmaceuticals to help us get well.” A famous senior executive at GlaxoSmithKline (whom she quotes) once publicly admitted that over 90% of pharmaceuticals are only about 30%–50% effective (depending on the genetics of the person to whom they are administered). Dr. Sylver discusses the effectiveness and toxic effects of pharmaceuticals in depth. The political aspect of both pharmaceutical drugs and their marketing is also discussed and referenced extensively. The section on vaccination is to be particularly noted—the history, politics, science, and their incorporation into our own genetic material (a sort of biologic gene editing phenomenon). And that is only Chapter 1.

Other highlights made a particular impression as well. Dr. Sylver discusses the inventions of Royal Rife and the discoveries of other healers in this field of holistic medicine. The entire history, as recounted in this book, is sordid, and reflects very poorly on the medical establishment, including the American Medical Association. We are given a multitude of choices for healthy living—with the caveat that “one size fits all” does not work for either bathrobes or diets. I was especially drawn to the section on gratitude, toward both the animals and plants that provide us with our food. The Brix measurement of plant vitality was a brand new one to me. High Brix means more nourishment, and is measured by placing a drop of plant juice on a device called a refractometer and seeing how much the light is bent as it passes through the prism. There is also a very interesting discussion of wheat, and how it has become modified from the original 14-chromosome gluten-poor grain to the current 42-chromosome gluten-rich grain associated with multiple forms of illness known as “gluten intolerance.”

One of the appendices gives an excellent discussion of various electromagnetic frequency devices and magnetic therapy in general. Another appendix satisfies the research junkies among us, a list of published papers and books on electromedicine dating back to 1877. Plus, there are still all the chapter references, almost five hundred for Chapter 1 alone. Appendix E gives a tantalizing glimpse of current research on frequency treatment of cancer cells *in vitro*. And Appendix F lists commonly used chemicals, almost all of which are toxic to human life. There is so much more to this book that you need to read it for yourself and decide what your favorite portions are.

If you want to learn about Rife therapy or the context in which it is best used, this book is an excellent place to start. It is also an invaluable reference manual for complementary therapies and holistic living in general. The writing is superb. The information is well researched, logically presented, and accurate. “We cannot die in peace without living in love,” writes Nenah Sylver. The overall impression this book leaves is one of light and healing.

I am beyond impressed.

—Martha M. Grout, MD, MD(H)
Arizona Center for Advanced Medicine
Scottsdale, Arizona

Royal Rife developed equipment to apply frequencies. Since that time, various types of effective frequency devices have been produced. Hundreds of cancer patients have recovered without the benefit of surgery, chemotherapy, or radiation. Lyme disease, Multiple Sclerosis, rheumatoid arthritis, and many other conditions have yielded to frequency therapies. Non-professionals have produced many of these results. I have had the privilege of watching many people self-treat and enjoy improvements in their health.

An attorney with an autistic son reported that her child seldom slept more than three hours at a time; he would wake up in pain. The two of them were getting six hours or less of sleep a night. After the mother gave the boy one frequency session, he started sleeping consistently for ten hours, and his behavior improved. A prostate cancer patient had difficulty urinating and tried frequency therapy. Five days later, the urine flow was normal. A leukemia patient had a white blood cell count of 250,000. He decided to use frequencies that other leukemia patients had found useful. After six weeks, his white blood cell count was down to 16,000. A patient with pulmonary fibrosis made crinkling sounds in his lungs as he breathed. He was told that his prognosis was hopeless, that his oxygen saturation would continue to decrease until not even inhaling oxygen would keep him alive. After frequency therapy he coughed up a lot of material, after which his lung sounds and oxygen saturation returned to normal. Several people with degenerative hip conditions have used frequency therapies. So far, all have recovered. It appears that when the infections in the joints are removed, the body is able to repair the damage. And yet, most physicians have never heard of Rife's work.

The Rife Handbook of Frequency Therapy is a book that doctors and their patients can use to learn about this safe, effective and non-toxic therapy for cancer and so many other conditions. Dr. Sylver presents a fascinating account of the life of Dr. Rife and his accomplishments. She describes how his discoveries were, and continue to be, ignored or opposed. She explains why you may not get the best available care when you seek medical help. She covers in detail helpful steps to take in moving toward wellness, including how to get quality water and how to detoxify the body. She covers what you need to know to conduct a frequency therapy session. She lists a large number of conditions with appropriate frequencies. And she offers a wide range of complementary therapies that are natural, effective, and easy to use for a wide variety of ailments. Dr. Sylver has spent years studying how people get sick and how they can get well. She presents a wealth of valuable material that will be beneficial to all kinds of practitioners including doctors, and to those on the road to recovering their own health.

—Richard Loyd, PhD
practitioner, Health Balances
Graham, Washington, United States
and coordinator of the Rife International Health Conference, www.RifeConference.com

Nenah Sylver's direct style is a prophetic voice for the medicine of the future. She provides a well-organized history of Rife's work and a seminal guidebook for the modern application of his discoveries. This significant volume will encourage lively and informed discussion regarding the implications of bio-electromagnetic energies for human wellness.

—Joel P. Carmichael, DC, DACBSP
president, North American Academy of Energy Medicine
author of *What Should I Eat? A Food-Endowed Prescription For Well Being, 2nd Edition*
and *Nutrition For Endurance: Finding Another Gear*

Dr. Nenah Sylver's 2001 edition offered an impressive collection of long-suppressed information to help people break away from the self-serving deceits employed by conventional allopathic medical care and the pharmaceutical industry. With this new volume, Dr. Sylver demonstrates her mastery of this complicated field with massive amounts of hands-on information that you must learn if you are to finally be well. She courageously demonstrates how each of us has the power to take charge of our own lives and create our own wellness protocols, without abdicating responsibility to anyone else. *The Rife Handbook* is destined to become the definitive reference on attaining self-directed, holistic health.

—S. Nathan Berger, DDS, PC
Rife researcher and biological dentist

It doesn't happen very often, but occasionally I read a massive book on natural health and healing that just plain blows me away. Dr. Nenah Sylver's huge and impressive *Rife Handbook* is more than merely the best and most complete compendium on frequency healing that I've ever seen. In addition to a massive cross-referenced frequency directory for most human ailments, this wonderful book also features detailed, helpful, and groundbreaking information on complementary therapies—and much, much more.

—Chet Day
Health & Beyond Online, www.chetday.com

As an AAMA Board Certified Alternative Medicine Practitioner, I have many fine modalities from which to choose. I recently experienced a health issue that failed to be helped by either conventional allopathic medicine or even alternative medicine treatments. However, after a Rife frequency square wave treatment protocol was applied, this health issue was completely resolved.

Rife technology, until now, has been largely questioned by both alternative medicine and allopathic practitioners for efficacy and disease resolution. But *The Rife Handbook* will dispel your doubts. It is the recommended work for practitioners who need to understand how and why this therapy works, and who want to utilize frequency therapies in conjunction with current preferred interventions to help their patients heal. Nenah Sylver's definitive interpretation of frequency therapy identifies applications, indications, contraindications, safety, and specific treatments along with directions specifying "how, when, and what frequency" for therapy sessions. The detail with which the author examines treatment modalities is remarkable; she presents a variety of protocols to resolve most health issues. It is rare that I read another's views of various alternative medicine therapies that exude such succinct clarity and comprehension as hers. Dr. Sylver has a remarkable grasp of what works, how it works, and on whom it may be effective.

This well-referenced treatise provides treatment options when progress falls short, or when there appears to be an impassable plateau in the way of optimal recovery.

—Bill Misner, MS, PhD
AAMA Board Certified Alternative Medicine Practitioner

When Nengah Sylver published the first edition of *The Rife Handbook* in 2002, it received excellent reviews as the best book in the field. This new version is substantially updated and improved, reflecting many of the advances in frequency therapies that have occurred in over a decade. Frequency therapy, properly applied, may well replace every other modality. Frequencies can alter DNA, kill or enhance cells, affect all chemical interactions, break up toxic substances and cause them to be eliminated from the body, kill pathogens that disrupt bodily function, and enhance and stimulate all cells and organ systems to higher levels of performance.

There are superbugs and bioengineered diseases out there that might make it to your neighborhood. Will your local medical clinic help you when thousands of people are dying from a strange disease? Don't count on it! If you want to live long and prosper, learn about frequency therapy. Dr. Sylver spends a lot of time in her book to help you use frequencies safely. Even if you just want to make life a little better for your family and friends, you will want to read *The Rife Handbook*.

—Jeff Sutherland, PhD
co-principle investigator of research grants, National Cancer Institute
assistant professor, Department of Radiology, University of Colorado School of Medicine
co-founder, Center for Vitamins and Cancer Research
Frequency Foundation, Boston, Massachusetts, United States

We work in the area of complementary and holistic cancer healing education and recommend Rife therapy to all our clients. *The Rife Handbook* is a bible in our office, an invaluable tool toward the healing of dozens of cancer victors. Nengah Sylver's research is thorough and detailed. The book sits on a prominent place on my shelf next to every frequently used manual in my practice.

—Ellyn Hilliard, CNC, PhD
former co-owner of Twelve Ways Healing Center in Colorado, US
and author of *Cancer Healing Victories*

Royal Raymond Rife discovered one of the most groundbreaking medical tools of the last hundred years. Due to political and financial interests, his discoveries were driven underground. But today, people suffering from cancer and other diseases can base their treatment on authentic science instead of politics. A scientist in the true definition of the word, Dr. Sylver methodically guides readers through Rife's life and achievements, with a history of the technology and the scientific foundation for its use. She also provides practical tips that can be easily integrated into a comprehensive protocol for a wide variety of health conditions. Nengah Sylver is the "researcher's researcher"; I habitually turn to her work as a trusted reference. I recommend *The Rife Handbook* without reservation to every health seeker, patient, physician, and scientist who values objectivity and innovation in medicine and wants guidance on complementary healing modalities.

—Bryan Rosner
author of *Lyme Disease and Rife Machines*,
The Top 10 Lyme Disease Treatments,
and *Freedom From Lyme Disease*

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an integrated approach for cancer and other diseases

*Updated and Expanded 5th Edition
second printing*

Nenah Sylver, PhD

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You must use the contact form at www.NenahSylver.com, as the author is unlikely to respond initially to phone calls. To request an interview, private consultation, group class, educational seminar, the author's participation at a conference or on a panel, or to submit products or equipment for testing, please use the contact form.

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*The Rife Handbook of Frequency Therapy and Holistic Health: an integrated approach for cancer and other diseases.
Updated and Expanded 5th Edition*

The first softcover edition of this book (with a different title) was published in 2001 by The Center for Frequency. Two larger, revised hardcover editions, almost identical, containing substantially new material, improved organization and an index, were published in 2009 and 2011 by Desert Gate Productions LLC.

An updated and expanded 5th edition (with 1104 pages, almost 400 more pages than the 2011 volume) was published in 2018 by Desert Gate Productions LLC.

In this second printing of *The Rife Handbook 5th Edition*, copyright 2021, a few errors have been corrected and some updates and newer material have been added to the text. The page count remains the same.

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New interior book design by Nenah Sylver.
Cover design by Duane Burchett and Nenah Sylver.
Index by Nenah Sylver.

Cover Images, Back.

Top: Bipolar nerve cell, as seen through the Ergonom microscope.

Middle: Cross section of a bone 3.5 mm thick, as seen through the Ergonom microscope.

Bottom: Cell division, as seen through the Ergonom microscope.

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This book is dedicated

to all peoples everywhere—

black
brown
red
white
yellow

who seek
clean food
pure water
dependable shelter
right livelihood
and radiant health

who want to be
acknowledged in community
respected for their humanity
and honored for their divinity.

May they find the
dignity
joy
peace
and love

that is their birthright

and may they always have
freedom
to choose the course of their own lives.

Disclaimer

The information given in this *Handbook* is for educational, informational, and investigational purposes only. It is not to be construed as diagnosis of disease, treatment of disease, prevention of disease, or as a replacement for consulting a qualified medical practitioner.

Be careful when investigating this technology! Protocols may need to be modified, or used with only certain types of equipment and not others—or this technology may be contraindicated entirely—if you have a heart condition, are wearing a pacemaker or autodefibrillator, are pregnant, are nursing, have blood clots, are taking strong medications such as chemo, are taking herbal or nutritional supplements, have a medical need to suppress your immune function (such as organ transplant recipients who are taking immunosuppressive

drugs), are wearing metal implants or stents, have breast implants, are especially sensitive to radio frequency (RF) or other electromagnetic radiation, or have especially sluggish detox/eliminative functions (liver, colon, kidneys, and lymph system). Before using any equipment, and to see if you should even be experimenting with this technology, please read the beginning of Chapter 4, which explains these circumstances and the precautions to take. The author, publisher, distributors, and sellers of this book are not responsible or liable for the results of your experimentation with Rife Therapy or your use of any other protocols described in this book. The reader accepts full responsibility for any and all consequences of trying or using these modalities. *If you have a medical condition, see a qualified health professional of your choice.*

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Detailed chapter outlines, containing up to four levels of headings and subheadings exactly as they appear in the text, are at the beginning of each individual chapter.



Royal Raymond Rife with one of his microscopes, 1929.

© *San Diego Historical Society; used with permission*



Acknowledgments

This book would never have been written without the pioneering discoveries and great personal sacrifices of Royal Raymond Rife. Likewise, I am indebted to the archivists, electronics engineers, microscopists, medical researchers, and others who came after Rife and continue to contribute to and refine the growing field of frequency therapies. This *Rife Handbook* is not intended to supplant anyone's research, discoveries, or devices. Rather, it is meant to guide you through Rife's healing modality that has reemerged and been updated, after being suppressed for over half a century. This book is also intended to provide you with a solid introduction to natural health so you can utilize this versatile frequency therapy to its best advantage.

Throughout the years, as this book has grown in size and detail, more people have critiqued it, adding to the complexity of its contents. There are many researchers in the Rife Therapy field who deserve to be acknowledged for their efforts to promote this drug-free, non-invasive modality, although not all are in the public eye (or want to be). Of those who can be named, I thank Brian McInturff for his early Consolidated Annotated Frequency List and continuing contributions to the Rife community; Jeff Sutherland, PhD, for his eclectic approach and assistance to me in the early years of this manuscript; and Jeff Garff, Shawn Montgomery, Jason Ringas, and Stanley Truman for allowing me to use documents and photos from their archives. I also thank Dave Felt, who spent many hours

patiently answering my questions and explaining technical issues (particularly as they pertained to engineering); and Marty Monahan, DC, NMD, who kindly gave me some additional frequencies he has used successfully in his clinical practice. Edna Tunney and her staff at Resonant Light Technology Inc. also have my thanks for giving me the kindest, most polite encouragement as only Canadians can. And I appreciate Bryan Rosner for his unique insights on protocols that help eliminate Lyme disease, as well as for his enthusiastic support.

There are some very special people in the forefront of the Rife community that I want to tell you about. Peter Walker, founder of the decades-old organization Rife Research, Europe and the Rife Forum (rifeforum.com)—and who then began hosting dozens of other types of health-related groups—has been instrumental in helping to keep the Rife community afloat and active, for which the world owes him a huge debt of gratitude. Over the years, Peter has graciously provided me with information and much practical assistance in many areas. I continue to be thankful for his dedication and efforts.

Another multitalented individual is Rife researcher, musician, mathematician, and historian Charlene Boehm. With her incisive mind for details and dedication to ethics and accuracy, Char would always make time to explain technical information. She also reviewed my history of Royal Rife and corrected a few errors—some of which had already been widely disseminated for years on the

Internet and on the printed page, and then unfortunately made their appearance in previous printings of this book.

Richard Loyd, PhD, is an exceptionally kind and caring researcher and practitioner. Dr. Loyd has generously shared his extensive knowledge of frequencies, his clinical findings, and many wonderful articles on electronics and nutrition. He has also freely and humbly acknowledged what has not worked, reminding me that sometimes, we learn from our mistakes even more than our successes.

Jimmie Holman of Pulsed Technologies is another person I have been honored to call a friend. Over the course of five editions of this book, this brilliant scientist has also functioned as a mentor. I will always treasure his willingness to share his innovative research, accompanied by a generous dose of patience as I sometimes struggled to understand what I was being taught.

Finally, I want to mention the late Steve Haltiwanger, MD, CCN. Steve possessed a giant intellect and encyclopedic knowledge, which he used in his many professional capacities to help countless health seekers. However, what I will equally remember him for is his kind and generous heart, which is what impelled him to so freely share what he knew with whoever wanted to learn. My many hours of discussion with Steve inspired me to include some important material in this book. Steve passed away after the 5th Edition was published but before this second printing was released. I will miss him.

On the practical side, some of the organizing assistance for past versions of Chapter 5, provided by Linda Thieman, MA, were retained for this current edition. Ann Rogers and Ron Strauss, who provided the index for earlier editions, laid the foundation for my indexing of this current volume. Duane Burchett, with good-natured patience, provided many versions of this new cover until I was satisfied.

Rife therapy should be administered holistically, as part of an overall wellness protocol. Therefore, this book addresses many complementary modalities. A project of this scope and depth could not have been completed without input from health professionals and educated laypersons versed in acupuncture, biology, chemistry, chiropractic, herbology, massage therapy, physics, and even law. There are too many people to name who provided input for both past and current editions. I trust that you all know who you are and will accept my thanks.

In the personal arena, I am blessed by two wonderful people who have become my family and constantly show me that our companions in life can help us work miracles and weather any storms, no matter how bleak life may appear. Throughout the decades that I labored on all

versions of this book, Paul Silverfox helped with countless everyday tasks so that I could spend uninterrupted hours writing. He reviewed all of the previous editions as well as this current one, remaining cheerful no matter how many rewrites I asked him to critique. From his perspective as a licensed massage therapist, he offered sage advice on many topics concerning health and gave me encouragement whenever I needed it. I will always treasure his friendship, support, wisdom, and common sense. For the 5th Edition and this second printing of the 5th Edition, James Dutcher provided enthusiastic and loving encouragement as well as highly personalized computer and software support. He upgraded, debugged, and repaired my computer—day or night, whenever it was needed. Most importantly, he spent many hours helping me navigate a frustrating and complicated software program for professional publishing. Doing my own manuscript layout was not only exhilarating and empowering, it immeasurably influenced my writing. I cannot emphasize enough how formatting this book myself allowed me to include more, essential, and timely information, organized in a way that makes complex data easier to absorb. In a sense, this book has been created for you by three people. I could never have written it without Paul and James. Having loving friends and comrades in life makes even gargantuan tasks manageable.

There are many others I want to acknowledge, even though I'll never meet them face-to-face. First are the thousands of people who, over the course of two decades, telephoned or emailed me about their health concerns. Their questions propelled me to search for answers, and because of that search I was able to write a better book. I also want to acknowledge members of the Internet health group community, people from all over the world who shared their very personal stories about how they were helped by frequency therapies and other complementary modalities. I found these accounts informative, inspiring, and often moving. Finally, I want to acknowledge those who sent me personal emails thanking me for writing this book and helping to make the quality of their lives better—and in some instances, for saving their lives. Whether or not I truly can (or should) accept credit for that feat, such comments literally take my breath away. When I receive such heartfelt missives, I know that I have succeeded in doing the job I'm supposed to be doing.

There is one more person I want to sincerely thank: you, the reader. Your courage to question the status quo, your desire to learn new ways of healing, and your willingness to take responsibility for your health, are a testimony to what holistic medicine is all about. It is in service to you that I have written *The Rife Handbook*.



Foreword by Steve Haltiwanger, MD, CCN

Medicine is a cult. Just as religion has its catechism, medicine has a set of credos based on faith. The faith says that if you take a pharmaceutical, it will fix everything. But this is a delusion. Pharmaceuticals do not heal. In order for true healing to take place, you need raw materials: amino acids, fatty acids, minerals, vitamins. Otherwise, cells do not work, tissue cannot be restored, and symptoms will not abate. They will not ever abate, not unless the body is given the chance to fix itself. Therefore it is my great pleasure and honor to be asked to write a foreword for this new edition of *The Rife Handbook*. It does not ask that you accept what is written on faith. You are presented with some solid science that organized medicine denies, the self-serving political agenda that organized medicine tries to cover up, and the contradictions in logic that organized medicine tries to pretend do not exist. And then it is up to you to decide what to do about your health.

I met Nenah Sylver at a scientific conference many years ago, and she and I stayed in constant contact thereafter. I found her to be a compassionate individual and a good friend. Nenah is not only an outstanding writer and the author of the best electromagnetic medicine book currently on the market, she is also a multi-talented musician and songwriter. A person of depth, she has lived an interesting life. She has always collected and surrounded herself with individuals who are curious and expansive in their vision. Not surprisingly, she gathers and assembles information the same way. She does extensive research, so her readers can be satisfied that

the information she has collated has been checked. She asks the same question, of several people, until she is satisfied with the answer. In her investigations into new developments in the scientific community, Nenah is in regular communication with innovators. This includes manufacturers of electromagnetic medicine equipment. Then she assembles a voluminous amount of information, and somehow it all neatly fits together into a book.

While this book has “Rife” in the title, it is a much broader review of multiple technologies that can be used to promote health. I ought to know. I have lectured for thirty-three years in seventeen countries on topics involving electromagnetic biology, infrared therapies, PEMF therapies, psychiatry, and nutritional treatments of neurological conditions. Over the last twenty-two years, I have participated in seventy-two research studies focused on the use of PEMF devices, microcurrent treatments, infrared therapies, photobiomodulation, nutritional supplementation, and laboratory analysis of human chemistry. I have formulated numerous nutritional supplements and I’m a consultant to several companies in the medical field. With my background and experience, I am pleased to say that this book is an invaluable contribution to the holistic and alternative medical fields. It is documented and sophisticated enough for the professional, and accessible enough for the layman.

With information expanding at a geometric pace, it is impossible to keep current with all the equipment that is being invented and produced. It is also difficult to keep

current with all the advances in complementary medicine. Therefore, although this is called a “handbook,” a better name might be “the bible of electromagnetic devices and complementary medicine made accessible to everyone.” My one complaint is that I don’t have enough time and money to buy and try all the technology described in this book.

This book is not the type that you usually read cover to cover. Instead, it is like an encyclopedia in which you search out specific topics that you have an interest in exploring. As you look through this book, you’ll discover how the properties of electricity, magnetism, light, and sound can be utilized by devices to affect and regenerate the human body. You’ll also learn about more complementary therapies than you possibly have time for. While these therapies reinforce the benefits of having an electromagnetic medical device, if you don’t own a piece of equipment just yet, the therapies can do a pretty good job on their own. In fact, the therapies are critical to becoming well and staying well.

Having had the pleasure of reading prior versions of this book, I am happy to report that this current version has vastly improved, like fine wine that gets better with age. This 5th edition has been expanded by over three hundred carefully documented pages. *The Rife Handbook* is an invaluable resource, not only for scientists and health professionals, but also for individuals who want to know more about technologies and adjunctive health therapies. I urge you to use this book as a guide and as a reference. Savor it.

—Steve Haltiwanger, MD, CCN

lecturer, researcher, psychiatric consultant, and
consultant in Rife Therapy,
electromedicine, and nutrition

medical director and consultant for many
international nutrition corporations

former medical director,
Emmanuel Center for Health

author of dozens of research papers, including
“The Electrical Properties of Cancer Cells”

co-author of the book *The Electric Human*
(pulsedtechresearch.com)

MILBANK JOHNSON, M. D.
PACIFIC MUTUAL LIFE BLDG.
LOS ANGELES, CALIFORNIA

November 9, 1931

My dear Mr. Rife:

In the name of the other three gentlemen and myself I want to thank you for your most courteous reception and for giving us an opportunity to have a glance of your wonderful microscope. I want to say to you that we all spent one of the most instructive and interesting afternoons of our lives in your laboratory.

Upon returning to San Diego that evening I wired to Dr. Arthur I. Kendall of Chicago and gave him a brief description of what we had seen and our opinion of it, and upon my return to Pasadena this morning I received the following telegram from Dr. Kendall - "Expect to start for California Saturday night. Letter follows".

If he comes straight through, which I think he will, he will arrive in Pasadena on Tuesday, November 17 so be sure and have your microscope in perfect condition for the Big Chief when he arrives. I will bring him down to San Diego in my car at which time you and Dr. Kendall can make such arrangements as you desire.

Thanking you again for your courtesy, I am

Yours very sincerely,



Mr. Roy Rife
2500 Chatsworth Bldg.
San Diego, Calif.

600 BURLINGHAM DRIVE
SAN RAFAEL HEIGHTS
PASADENA

*Letter from Dr. Milbank Johnson to Royal Raymond Rife, November 9, 1931.
Milbank Johnson became one of Rife's most enthusiastic supporters and a trusted benefactor.*



Royal Raymond Rife and Mamie Ah Quin Rife.

Courtesy of Jeff Garff



Introduction

Imagine what your life would be like if you could eliminate ill health in as little as one day for something mild (like the common cold), or in several months to a year, maximum, for a more serious illness (like cancer). To do this, you would need three things: a protocol to strengthen your system so that it's no longer a breeding ground for pathogens, a frequency device, and a list of frequencies to go with the device. You would not need toxic drugs or invasive surgery, you would not incur unfairly high medical bills, and you would not have to depend on doctors for long periods of time. This protocol is called Rife Therapy, named after its inventor Royal Raymond Rife.

American scientist Royal Rife, and his remarkable technology that has helped thousands overcome life-threatening diseases, is finally becoming more public after decades of suppression. As incredible as it sounds, though, the knowledge that specific frequencies destroy pathogens is not new. Royal Rife began his career as an inventor almost a century ago.

It all started with one of Rife's key inventions, a most unusual microscope. In those days, the magnifying power of existing microscopes was poor. Individual viruses, and even some bacteria, could not be seen because they were too small. Determined to view them, Rife built his highly acclaimed Universal Microscope. Many times more powerful than other magnifying instruments, the microscope made specimens visible without killing them. This feat was beyond the capacity of even an electron

microscope, which makes pathogens visible by bombarding them with electrons in a vacuum, thus destroying them.

Rife had a good reason for wanting to see specimens in their natural live state. If you want to discover how to kill a microorganism, you need to know how it reacts to its environment. Once Rife could observe the activities and responses of living microorganisms, he could devise a method to destroy them. Hence, the Rife Ray was born.

Rife's strategy of destroying microorganisms was based on the principle of resonance. Every living organism has a resonant frequency, or intrinsic radiation signature. The cliché of the soprano who shatters a glass with her single, pure, focused tone is (for now) an adequate working metaphor for how Rife's electronic device worked. The various frequencies it emitted, via an electromagnetic field, corresponded to the resonance of different pathogens and therefore disabled them. Once they were no longer viable, the body's immune cells could eliminate them.

Tests were successfully conducted on thousands of infected animals. Many of the most prestigious doctors and pathologists in the US, impressed with the initial results, supported Rife in several ways. They gave him money, worked with him in his laboratory, substantiated his findings, and used the Rife Ray in their US and overseas clinics. Some doctors even sent Rife notarized affidavits affirming the effectiveness of the treatments. Accounts of Rife's microscope and ray machine were published in newspapers, journals, and medical bulletins across the United States.

Ironically, Rife's treatments may have been too successful. The medical-pharmaceutical industry, foreseeing a massive loss in profits from drugs and surgeries, appointed some very vocal opponents—none of whom, it should be pointed out, tested the machine. The physicians and financial backers who had been Rife's colleagues and friends became targets of character assassination. Medical boards threatened to revoke the licenses of doctors who used the Rife Ray unless they relinquished their equipment. Some of Rife's closest collaborators later denied even knowing him, despite the existence of a widely circulated photograph in which they appeared with him at a banquet in his honor. Articles on Rife and his inventions began disappearing from newspaper archives. The greed and callousness of the wealthy powerful few deprived many sick people of healing and even cost them their lives. Vilified and discredited by the ignorant and greedy, his technology misunderstood and underutilized, Royal Raymond Rife died in 1971.

Rife's story, while unique in some ways, nonetheless follows a familiar pattern. First, a therapy is discovered that's non-invasive, inexpensive, and drug free. Next, after it makes large numbers of people well, its inventor, proponents and users are privately harassed, publicly humiliated, and legally persecuted. Perhaps they even die of mysterious causes or under suspicious circumstances. Finally, steeped in rumor and innuendo, the modality disappears. As with other promising complementary treatments, Rife's therapy was driven underground.

The long silence on Rife and his inventions was finally broken with Christopher Bird's article "What Has Become of the Rife Microscope?", which appeared in the March 1976 issue of *New Age Journal* and was later reprinted in other publications. Then in 1987, Barry Lynes published *The Cancer Cure That Worked*, an emotionally-charged glorification of Rife's life and work. However, original source material was scarce. Movie footage from 1936 showing Rife in his lab, and a few equally old photographs, provided the only visual clues about the equipment.

Gradually, other memorabilia surfaced: Rife's surviving lab notes, letters, telegrams, photographs and awards, all unearthed from different locations. One researcher spent hours rummaging through the morgue files of a California newspaper office to find decades-old news clippings. Another investigator spotted articles in obscure yellowing engineering journals. Still others uncovered documents in the attics and basements of people descended from Rife's colleagues and co-workers. One astonishing find was an old trunk full of reel-to-reel tapes, featuring discussions between Rife and his close colleagues. The tapes were transferred onto CDs and made available to the public.

Around 2005, a non-working Rife Ray was found in a museum and restored by a team of resourceful engineers. Shortly after, a US frequency equipment manufacturer acquired a box of priceless documents from a nurse who had once worked with Royal Rife's colleague John Marsh. This manufacturer was then given an old schematic of one of Rife's original units built in the 1930s. With the help of others—including an elderly engineer familiar with the tube technology of Rife's era—he deciphered the almost illegible drawing and reconstructed the model. Then an actual prototype of yet another model was discovered, and the Rife community was closer to understanding how Rife's technology worked. This knowledge was not merely academic. It could, and would, lead to the production of more effective modern units.

Also around this time, the most powerful of Rife's microscopes was resurrected: the Universal Microscope (after being stolen from Rife's lab decades earlier and then recovered). Kept safely in an undisclosed location, it underwent meticulous restoration by several key researchers until it was again taken. Predictably perhaps, the cloak-and-dagger antics of secrecy, theft, and duplicity that had plagued Royal Rife have continued today.

Fortunately, not everyone interested in Rife history wanted to hoard their treasures. Many documents, along with designs of Rife's original ray machine, were posted on the Internet. This global sharing has allowed Rife's diverse technologies to inspire progress in many fields of electromedicine today. Using the primary source materials as references, scientists, health practitioners, electronics engineers and curious laypeople are now experimenting with different types of machines as well as new frequencies. With a rapidly growing, fresh generation of wellness seekers demanding access to life-saving technology, a new era of frequency healing has been born.

Although frequency equipment has been substantially modified and redesigned since Rife's colleagues treated people in the 1930s, 40s and 50s, the basic principle of how the devices work—pathogen destruction through resonance—remains the same. There are now hundreds of companies, on every continent of the globe, selling frequency therapy units to address all types of diseases. Despite the intimidation tactics of the medical-pharmaceutical industry and some government agencies, more researchers are stepping forward to share what they know, via the printed page, radio, electronic media, and at conferences. In addition, medical clinics and formal and informal research centers are springing up all over the world: Australia, Mexico, Canada, the Netherlands, New Zealand, South Africa, Germany, Romania, and the United States, among other countries.



It was over 30 years ago—around 1983, long before the massive infusion of Rife-related artifacts—that I first heard about Rife’s technology. Cryptic fliers from companies specializing in unusual devices somehow found their way to me. From time to time, electronics buffs and complementary health practitioners would tell me about a device that emitted frequencies to reverse disease, but they were extremely vague in their accounts and couldn’t or wouldn’t elaborate. The couple of fliers that specifically addressed rife machines gave, for merchant contact information, addresses that were either in Mexico or for United States post office boxes, so I wasn’t sure if the sellers were honorable. Because I still had more questions than answers about the information I was seeing, I didn’t do much more than collect data.

Thus for many years, Rife and his inventions occupied the same category as all the other unsolved mysteries of the universe, like who built the Easter Island statues and how did the Bermuda Triangle sink ships. Although my collection of papers taunted me with their “too good to be true” rumors, my intuition told me that this information was vitally important and would one day bear fruit. So I put everything into a file folder and waited, remaining open to whatever the universe might choose to reveal.

Then in 1993 I met Howard, a US-based dulcimer maker and musician who had majored in electrical engineering at Cornell and was now retired. With his highly inquisitive mind, engineering background and love of tinkering with machines, Howard was an ideal Rife researcher. (He had already demonstrated an affinity for unusual science projects: One winter holiday, he sent me several Petri dishes containing glow-in-the-dark fungus as a gift.) Howard had previously been interested in frequencies as a musician (as had I), so learning about Rife was a logical next step. When he informed me that unfortunately (for experimentation purposes) he was in excellent health and therefore had no way to test his (not one, but two) frequency units, I could not believe my good fortune. Having suffered for years from a severe systemic *Candida albicans* infection and desperate for relief, I instantly volunteered to do the testing for him. Just as eagerly, Howard accepted my offer. This is how my academic query turned into a hands-on experiment.

Little did I know that my experimentation would lead me to unexpected and startling places—and continue indefinitely. I exposed myself to many different types and makes of machines and tried nearly all of the frequencies that were on the lists that came with the units.

My efforts were rewarded when the *Candida* became more manageable. Then I began helping friends and acquaintances with health problems of their own.

As people learned that I was experimenting with rife technology, they began asking me about Rife and his life, how frequencies work, and about healing in general. Not knowing all the answers—especially when they involved electronics and details about pathogens—I pumped information from every knowledgeable professional who was willing to talk to me. Dragging out my dusty medical and science textbooks, I increased my knowledge about biology, brushed up on physics, labored over chemistry, and struggled with electronics. I also read every book on Rife that I could find. The problem was, except for Barry Lynes’s indignant little paperback and one highly technical manual on how to build a frequency machine, very little information on Rife and his inventions was available. Not only that, there was no cohesive guide to understanding or using frequency equipment. Plus, information on the frequencies themselves was scattered in many different places. So I began to compile a simple guide of popular frequencies that I had personally found to be effective, while continuing to work with new frequencies.

Almost immediately, it became clear to me that I couldn’t just create a list of numbers to go with the equipment. I wanted people to understand that in most cases, it wasn’t enough to receive frequency sessions; they had to actively eliminate the conditions that had allowed their illness to occur in the first place. I needed to investigate, refine, and explain a solid, workable paradigm of what it meant to be healthy.

At that point, a major area of my life had become heavily impacted by my involvement with Rife research: my work as a Reichian (body-mind) psychotherapist. More and more clients were coming to me who were struggling not only with knotty emotional issues, but also with serious physical ailments. They had been taught that Western medicine was the only legitimate modality, so they weren’t convinced that holistic methods could help them. Some clients had trouble understanding that physical disease can influence one’s emotional state in unexpected ways. This lack of comprehension struck me as odd—considering that they had specifically sought my services because they knew that unresolved emotions lodge in the body as muscle tension, which causes biochemical changes that eventually lead to illness. But it never occurred to these same clients that many emotional problems can be exacerbated, or even directly caused, by the same biochemical imbalances and pathogens involved in disease! This piece of information even more strongly fired my resolve to focus on the physical, as well as emotional, origins of disease.

The more I became immersed in frequency therapy, sharing—with friends, acquaintances and even strangers, anyone who'd listen—became a full-time job. There was so much to report and explain that I was teaching even in social situations when I “should” have been relaxing. I did recognize, though, that this was a lot of information for people to handle—especially in a social situation, where they're not expecting to be bombarded by an impassioned lecture on medicine. Also, people tend to retain information more easily if it's written down. And, most important, although my enthusiasm never waned, my energy levels did. So I realized I needed another way to convey the material, and looked for well written, accessible books that presented the topic clearly and thoroughly.

To my great dismay, I couldn't find what I was looking for. What I wanted, very simply, was an all-purpose holistic health book that met many needs and featured a wide range of topics: cutting-edge research in medicine and science, an exposition on Rife and his work, and a foundational discussion of electromedicine (so people would understand why Rife therapy is so effective), along with a directory of frequencies to use for specific health conditions. Not surprisingly in retrospect, nothing suited my exacting requirements. After complaining for months about how hard it was to obtain reliable information about Rife, in conjunction with additional topics that I felt were essential—presented, no less, in just the way I wanted—I realized that the person who was supposed to put all this together was me. That is how my little list of popular frequencies metamorphosed into a project whose scope I couldn't possibly have foreseen. This fifth edition that you are now holding in your hands is the result of my curiosity, learning, labor and love over the course of two and a half decades.



Now that you have this *Handbook*, where do you begin? Some readers, especially those who own frequency devices, may be tempted to jump directly to the Frequency Directory (Chapter 5). But this *Handbook* is about much more than pathogen-destroying frequencies. It is about freeing yourself from medical propaganda, trusting in your own experience, and opening to the self-confidence and health that blossom when you think and act for yourself. So please don't ignore the beginning of the book. It shows you new ways to approach your body and healing, as well as addressing your questions about rife machines.

Chapter 1, “The Politics of Medicine and the Nature of Health,” is a primer on allopathic vs. holistic (also known as “complementary,” “alternative,” or “functional”)

medicine. It explains why most drugs don't work and in fact make you worse—as well as how most clinical trials are not only worthless, but can be rigged to “prove” whatever outcome the experimenter wants. The reader is also shown how drugs are approved, and by whom—which in virtually all cases, involves politics and profit rather than humanitarian concerns or even good science. This chapter also contains a brand new section on electrosmog: what it is, how it affects us, and how to avoid it.

Chapter 2, “The History of Pleomorphism and the Inventions of Royal Raymond Rife,” features Rife's unusual life and the controversial debate over pleomorphism—a phenomenon relatively unknown in the United States, but widely understood in Europe. Pleomorphism is the ability of pathogens to radically change their form, structure and function, from simple and primitive to highly complex and multi-functional, depending on the changing terrain of the body. Rife's microscope showed that often, pathogens become dangerous only when the system becomes biochemically unbalanced. So, if you are attached to the germ theory of disease, this chapter will give you a different perspective. The debate on pleomorphism is important, because as long as we perceive ourselves as helpless victims of germs, we'll continue to rely on pharmaceuticals to help us get well. But if we understand that pathogens can and do adapt to their environment, we can lessen or remove their harm, knowing that we can alter that environment—the terrain of our own bodies.

The task of making that terrain (ourselves) less hospitable to pathogens leads us to Chapter 3, “Healthy Living and Complementary Therapies.” Here, you will find some of the most effective, user-friendly, and inexpensive protocols to help you detoxify and heal. This chapter is a guide for frequency device users who want to handle the effects of sudden microbial die-off. But it's also designed for non-rifers who want clarity about lifestyle choices, and are eager to learn about some of the best, mostly self-administered, holistic protocols available today. Readers already familiar with these protocols will learn new ways to approach what they're doing. The range of therapies is vast. In addition to ozone, sauna and light therapies, Inclined Bed Therapy, and homemade colloidal silver, I have added sections on homeopathy, organ cleanses, and so-called “folk” remedies that really work—activated charcoal, clay, and castor oil. This edition also contains vital new information on food, exercise, and nutritional supplements. Also, from my Reichian psychology background, I discuss the relationship between mind and body and the psychological aspects of what we call disease.

Chapter 4 shifts our focus to the “how to” of Rife's technology. To apply this technology correctly, you need

to know who can benefit from the equipment and who should not use it, and under what circumstances; what type of frequency device might best suit your needs; how to give yourself a Rife Therapy session; how to administer sessions to children, pets and the elderly; how to select the correct frequencies; how to deal with detoxification reactions from microbial die-off; and what to do if you're not getting the results you want. If you already own a frequency device, this chapter will help you use it to its full advantage. If you don't own one, this chapter will help you choose the unit that's right for you. In addition to older material that has been rewritten for clarity, there are some new sections, including one specifically for practitioners on how to incorporate this therapy into a busy practice.

Chapter 5, offering an extensive "Frequency Directory," also teaches the reader how to navigate through the alphabetized listings that provide frequencies for common and exotic diseases. In addition to conditions such as allergies, cancer, HIV, Lyme disease, Morgellons and neurological disorders, Chapter 5 includes the viruses, bacteria, parasites, protozoa and fungi that are implicated in these symptom pictures. This chapter also doubles as a basic medical primer for the layperson; so even those without a rife machine will benefit from its contents. Summaries of the functions of organs, glands, and bodily systems accompany the listings, along with suggestions of holistic therapies that support (or can be substituted for) the frequency therapy. When medical terms are used, they are always translated into plain, everyday language.

Chapter 6, "Creating a Better World, Inside and Out," deals with topics that might be regarded as optional, but they will help us meet today's challenges. Many people are unprepared for death and they fear it, both for themselves and their loved ones. Yet paradoxically, in the United States at least, the dominant values (not to mention images) of the culture are filled with death. Our social system supports misery, poverty, fear and hate, instead of joy, abundance, truth and love. We cannot die in peace without living in love. In this chapter I discuss the changes that must be made on all levels—personal, political and transpersonal—in order for a life-based culture to emerge. In keeping with this theme, I could not resist including some exciting, groundbreaking scientific research that points to the existence of what some call "spirit" and proves beyond a doubt that love heals.

Appendix A, "Resources," lists some great sources of health-related information, products, and services (including some new listings, such as EMF protection and personal care products). For those who want to offer Rife Therapy to others, Appendix B, "Legal Implications of Rife Sessions," discusses some challenges of using a

non-medically approved device for healing purposes. (Please note that I am not an attorney. Not all countries and municipalities have the same legal requirements for providing electromedical therapies. Use this section as a guide, but do consult legal counsel to ensure that you are compliant with the laws of your locale.) Appendix C, "Healing with Electromedicine and Sound Therapies," is written for the layperson with no background in physics or electronics. This overview, which includes definitions and concepts related to the electromagnetic spectrum and sound waves, will help you better understand the more technical aspects of almost any electromedical device you wish to use.

Appendix D lists some publications on electromedicine. You may be surprised to learn that medical doctors were using many of these technologies over one hundred years ago! Appendix E describes a recent US medical study of a frequency machine to kill leukemia cells. Appendix F lists toxic chemicals in household products that many of us use every day, so you can avoid them. These chemicals are totally unnecessary because, as described in Appendix G, there are "Safe Substitutes for Common Toxic Chemicals." Appendix H shows you how to assemble your own detoxification footbath for under ten dollars (and yes, it really does work). Appendix I, compiled just before this book went to press, presents medical studies showing the harm of WiFi, microwave ovens, cell phones, computers, and other electropolluting equipment. This is a vitally important appendix, because the telecommunications industry—often with the sanction of governments, worldwide—has not only suppressed these studies (and replaced them with lies), but is now pushing the even more dangerous 5G technology. This needs to be stopped. In References, for your convenience, I include contact information for some non-mainstream sources.

Now for some editorial comments. Because a major theme of this book is self-empowerment, I have tried to select my words carefully. When referring to people with health problems, I don't use the word "patient" because it reflects and reinforces a hierarchical model that exalts the doctor as the all-knowing savior and relegates the health seeker to a subordinate, lesser role. The history of the word "layman" reveals a similar subordinate status; and even though I use "layperson" instead of the gender-biased "layman," the origin of the word should be noted. Initially, "layman" meant any person (male) who was not a member of the laity (clergy). Later, "layman" was expanded to mean anyone who was not in a specialized profession. In other words, a layman is a commoner without a title. In today's dualistic world, more respect is given to those who hold prestigious titles and degrees than to those who

do not. In truth, many laypeople are highly educated and informed—often more than those with degrees—but their lack of medical credentials apparently still makes them commoners (unworthy). I couldn't find a suitable word in English designating someone who is not a medical professional yet is worthy of respect.

This leads me to my citing of people who don't hold titles or degrees. While I have, of course, quoted credentialed professionals whom I admire and respect, I have also quoted people who aren't well known or necessarily have degrees, but who offer valuable input. Considering how many medical researchers have falsified data and outright lied (explored in depth in Chapter 1), it seems fitting that we expand our notion of whose ideas are worth considering. It is my hope that common sense and a resonance with the truth, rather than degrees and titles, will prevail.

Despite my own language preferences, when quoting others I try to respect the writer's voice. Thus, if certain words are used (such as "patient"), I leave them in. The same holds true with spellings, such as British English, which is sometimes different from American English.

Royal Rife's name is used often, as one would expect. Appropriate to this usage, "Rife" is capitalized. However, "rife" and "rifing" are now being used as verbs (referring to the act of giving oneself a frequency session). For these, and for the noun "rifer" (which refers to one who gives oneself frequency sessions), the "r" is not capitalized. Similarly, when used to describe frequency equipment, "rife" is not capitalized, as none of the units being made today were made by Royal Rife the man. A similar logic explains why "rife practitioner" also uses a lower-case "r." However, when referring to the research, "Rife" is capitalized because engineers and scientists involved in this area are usually investigating the man as well as the technology. I do capitalize "Rife Therapy," however, to make this modality immediately visually recognizable and distinct from other holistic protocols being discussed.

My final editorial comment concerns the completeness of the data in this new edition. I have included current discoveries about health as much as possible. We already know that two scientists—who for years had been ridiculed by colleagues for insisting that stomach ulcers are caused by a bacterium—found *Helicobacter pylori* in the stomach lining of enough people with ulcers to win a Nobel Prize. However, dangerous microorganisms are now being linked to conditions we normally might not associate with pathogens at all. For example, one doctor found a corkscrew-shaped, bacterial spirochete in the spinal fluid of over 90% of his clients with Multiple Sclerosis. Actinomycetes is being tied to Parkinson's

disease. And irrefutable evidence shows that not one, but two strains of Adenovirus can make us fat. In addition, we now know that bones and fat cells produce hormones.

More details on medical cover-ups have also been included in this edition, although frankly, it's hard to keep up with them. There's a fresh scandal every month, if not week—about not only the adverse effects of drugs, vaccines and medical devices, but also the drug industry's attempts to hide, distort and outright falsify test results in the hope that consumers will continue to buy their products. Depending on the media spin, it's either sloppy science (their intentions are honorable and they're just incredibly incompetent), or outright lies (they know exactly what they're doing and don't care who they hurt). Every effort has been made to bring you the most up-to-date news. But unfortunately, more corruption always seems to occur (or at least becomes public knowledge). The printed page cannot match the speed at which electronic media disseminates new information. Therefore, you are encouraged to search for updates on your own.



The first edition of *The Rife Handbook* debuted at the March 2002 Rife Conference held in Las Vegas, Nevada, in the United States. Despite my having steadily been researching this technology for eight years at that time (long after I was given those first fliers about Rife's therapy), I could not have anticipated how many people were hungry for information about this unique healing modality. Nor could I have grasped the diversity and sophistication of knowledge required to be a researcher in this field—not until I attended the conference.

Being at that conference, as a speaker, author and student, changed my life. Health professionals, equipment manufacturers, and engineers were present. But others attended too—people who knew someone with a serious disease or who were ill themselves. Tired of the same old drugs-and-surgery routine dispensed by doctors trained in nothing else, they wanted something better. Several people who were already using the technology recounted successful interventions against cancer, Lyme disease, and other conditions. I was very moved by the courage of these folks who were taking charge of their own lives—often despite the hostility of their friends and families, and against the advice of their allopathically trained doctors.

I was also impressed by the dedication and talents of the researchers. While it was true that they could be a cantankerous bunch—quarreling about their pet theories, how things worked and how to best accomplish their goals—it was largely because they cared. They

cared not only about whether others lived or died, they also cared about the quality of people's lives. As I later discovered, many of the researchers (like me) had at some point struggled with severe ill health. Others began their research after the death of a close friend or family member.

As I listened to the presentations and saw how much there was to learn, it was hard not to feel overwhelmed by what the seasoned rifers knew. The field of Rife technology is so vast, it requires the knowledge and expertise of people in many diverse disciplines: the healing arts (medical doctor, acupuncturist, homeopath, naturopath, veterinarian, massage therapist); medical and scientific research (microscopist, laboratory technician, microbiologist); historical research (archivist, writer, filmmaker); physics; and of course electronics engineers, with their nuts-and-bolts skills of building equipment. Every rifer has something to contribute. This technology could not have come this far without input from everyone.

In the years since the first—and, in hindsight, very elementary—edition of this *Handbook* was released, I've had the almost daily privilege of connecting with customers from all over the world: Australia, Austria, Belgium, Brazil, Canada, China, Croatia, Denmark, France, Germany, Greece, Hong Kong, India, Israel, Italy, Japan, Kuwait, Manila, Mexico, the Netherlands, New Zealand, Norway, Pakistan, Poland, the Philippines, Romania, Singapore, Slovenia, South Africa, Spain, Sweden, Switzerland, Thailand, United Arab Emirates, United Kingdom, Zimbabwe, and of course my native United States. Words cannot adequately describe my appreciation of these rich multicultural exchanges. The health professionals wanted to learn more, do more. And laypeople, many of them quite ill, made a point of telling me how rigorously they had been seeking alternatives to the unhelpful medical treatments they had already tried. We may not be regularly reading or hearing about Rife's inventions in the national media, but that has not prevented knowledge of this therapy from spreading. People are waking up. They are intuitively sensing that frequency healing is a viable option, despite disparaging comments from the mainstream press. And these seekers won't stop searching until they find something that works.



Knowing how to operate frequency equipment and which frequencies to use is a good start for your health protocol. But genuine healing usually requires major changes. This is why *The Rife Handbook* contains more than the three chapters that deal with the history of Rife, the “how to” of his therapy, and the “which frequencies

should I use” advice. You are being asked to set aside a one-size-fits-all, pop-a-pill-for-instant-results mentality concerning medicine. You are also being asked to consider that your education in the sciences was at best incomplete, and at worst an outright lie. You are being asked to maintain (at least for a while) an open and inquiring mind. And you are being asked to make changes in your lifestyle if necessary. This could mean anything from different dietary habits to questioning authority or even to meditating daily. Transformation means thinking outside of the box—indeed, dismantling that box entirely! As a colleague said to me recently, “*What box?* There is no box!” The good news is, the more we extricate ourselves from old habits and rigid constraints, the more we can reinvent ourselves in increasingly life-affirming ways.

This new paradigm that I am asking you to consider does contain some familiar elements. After all, Rife's therapy—at least what he publicized—was all about viewing and devitalizing harmful microorganisms. But despite the clear association between pathogens and disease, this doesn't mean that we should ignore other issues pertaining to wellness. Healing means balancing the bodily terrain; even Rife himself stated its importance. (Hence, the need for lifestyle changes.) Also, despite Rife's spotlight on pathogens, we are realizing today that his therapy very likely conferred other benefits unrelated to pathogen destruction. The field created by his ray machine appears to have helped normalize tissue function. For many reasons, then, it's a mistake to utilize Rife's technology in an allopathic way.

Nevertheless, I do not intend to misrepresent Rife Therapy. Despite the amazing cures witnessed by Rife's colleagues, or how much I have personally benefited, or the many remarkable success stories reported by friends, colleagues and acquaintances, I freely admit that even an outstanding therapy has its limitations. There is no magic cure-all that has been found to work for everyone, always. While the majority of people respond favorably to sessions, some respond minimally or not at all. The machines cannot produce miracle cures; your body is in charge of that. If you faithfully give yourself rife sessions but continue doing what contributed to your getting sick in the first place, the best equipment in the world will not produce lasting positive changes. Also, *when* you use a healing modality is as important as the therapy itself. Depending on the extent and type of imbalance, one protocol may work better at a given time than another.

Sometimes I hear people complain when their healing is not progressing according to schedule. But whose schedule? We are not machines, even though the medical establishment would like us to believe that we are.

Furthermore, the medical industry has a very narrow definition of “normal,” even though people vary wildly outside the range of presumed “normalcy.” How many times have you heard of someone who felt unwell, only to have their doctor say, “There’s nothing wrong with you; you’re in perfect health”? We need to rely on common sense and how we feel, not blindly trust medical biases that have no foundation in fact. Much of modern medicine is based on arbitrary standards that change, according to the desires, agendas, and goals for profit of those in power.

Here’s a question, then, that I like to ask: If medical standards keep changing (apparently capriciously), and doctors keep changing their minds about protocols and prescriptions (based on these capricious standards), whose standards should we follow? And from whom should we seek guidance? Maybe it’s time to reevaluate the health care you have been receiving. Consulting with a health professional can be helpful and even essential, but you must use your own discernment too. Who is most qualified to help you? The person with the most impressive credentials may not be your best choice. If your practitioner doesn’t listen to your concerns or take them seriously, or if his or her training seems more important than what you are experiencing, maybe you should start looking for another practitioner.

You are the one who’s living in your body—so ultimately, your best teacher is you! However, to become that exemplary teacher requires commitment. You have to study, reason, decide what to keep and what to discard, trust your own (informed) experience, and be willing to make mistakes and learn from them. And you *will* make mistakes! But let that be okay. Taking responsibility and being accountable for our own decisions and actions makes us powerful. This book is a stepping stone to acquiring the knowledge that you need to become an expert...on you.



Today, five decades after Rife’s death, the concepts of Rife Therapy, frequency healing and resonance therapy—while not yet household phrases (at least in the US)—are trickling more into the public’s consciousness. In some circles, the technology is being used so regularly that the word “rifting” has become a verb. I think that Royal Rife would have been moved and gratified that his modality is finally being given the respect it deserves. I trust that by the time you finish this book, you, too, will be using the word “rifting” as a verb.

One final thought. More and more people are insisting that they aren’t commodities that are bought and sold in the marketplace. They don’t want to be toyed with, experimented on, or lied to. They don’t want their

treatment options limited by what their doctors were allowed to learn in medical school. And they don’t want licensing boards to prevent their own doctors from helping them: most boards forbid doctors to suggest alternatives to the prevailing (allopathic) standard of care.

People also want their health care providers to honor their need for compassion and hope as much as they honor their need for physical care. Health seekers want to be respected, to have their humanity acknowledged—and to be free to make their own choices. In other words, people want a voice in matters that affect them—and this includes the health protocols they use. No wonder polls consistently show that three-quarters of the United States population have sought complementary therapies in addition to Western medicine!

In this technologically advanced and uncertain age, with escalating infectious diseases and degenerative conditions, we need Rife’s and similar technologies more than ever. Yet the power elite is fighting back even harder, invested in perpetuating its own agenda and maintaining the status quo—at the expense of health and happiness, not to mention lives. Despite an obvious need worldwide for all kinds of electromedical modalities, information about Rife Therapy has largely been available only to the few who discover it by chance, or who know where to look for it (and to look for it at all). The majority of people in the United States are ignorant of this elegant technology that can substantially reduce suffering and save countless lives. My goal is for *The Rife Handbook* to empower significant numbers of people—not only by providing them with reliable information about more and better health care choices, but by inspiring them to spread the word to others that these choices exist.

The widespread use of frequency therapies, including Rife’s technology, promises to change the way medicine is practiced. Even if you are fortunate to be in good health now, it’s comforting to know that this technology is available if you or a loved one need it in the future. Simply by picking up this book, you have proven that you want more than what’s being offered by industrialized pill pushers, that you aren’t satisfied with the lowest common denominator of mediocrity. Anyone who seriously investigates Rife Therapy is making a statement. Therefore, you deserve to be congratulated for having the vision and strength to see through—and beyond—the dominant paradigm. It takes courage to challenge entrenched ideas!

I sincerely thank you for helping to create this positive global change in consciousness. It is truly a blessing to be accompanied by all of you who are embarking on this amazing journey of healing and hope.

The Campaign to Suppress Holistic Medicine

How did medicine in America shift from its early emphasis on prevention and health to a model of disease management?

In 1908, the American Medical Association's newly formed Council on Medical Education wrote to industrialist millionaire Andrew Carnegie to propose a collaboration to "reform" medical education. The Carnegie Foundation was allied with the Rockefeller family, which had interests in oil and was now investing heavily in pharmaceutical companies. The group decided to hire Abraham Flexner to investigate medical schools in the United States and Canada.

Flexner was a schoolmaster who knew nothing about the field of medicine. However, his brother Simon was director of the Rockefeller Institute for Medical Research. It's no surprise, then, that Flexner's findings—commonly known as the *Flexner Report*—heavily favored those medical schools that emphasized the use of pharmaceuticals. Wanting to improve the status of doctors, Flexner suggested closing most of the schools that allowed entry to women and black people. He advised the medical field to require specialization. And he insisted that funding and accreditation be given to only those medical schools that trained doctors in emergency and surgical medicine—both of which require the extensive use of drugs.

In response, the *New York State Journal of Medicine* berated the Carnegie Foundation for being dictatorial, for attempting to eliminate specific universities, for threatening the freedom of whatever medical schools were being allowed to remain open, and for denigrating anything that competed with the prevailing allopathic (Western, drug-oriented) methods. However, most other medical organizations and publications praised the Carnegie Foundation's goals precisely *because* of the clear bias against chiropractic, homeopathy, and all other forms of holistic medicine. The *Journal of the American Medical Association* supported Flexner's position as truth. Soon, the historic *Flexner Report* was widely acclaimed by everyone in the allopathic medical community. One hundred sixty medical schools had been open in 1905. But by 1927—just seventeen years after the *Flexner Report* was issued—that number dropped to eighty.

The Rife Handbook of Frequency Therapy and Holistic Health is designed to challenge this legacy of suppression and deception. We don't have to perpetuate what we have inherited. It's time to replace establishment medicine with true healing, derived from many disciplines.



Nearly all people die of their medicines, and not of their illnesses.

—MOLIÈRE, FRENCH WRITER (1622–1673)



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www.NenahSylver.com



The Politics of Medicine and the Nature of Health

TODAY'S CHALLENGE

Chances are, if you're reading this book, you have a health problem. Or someone you know does. Perhaps your treatment didn't work. Or it had too many unwanted, negative effects. Maybe it's taking too long. Are there viable alternatives for you, your family and friends? What are these other modalities, and how can you access them?

Perhaps you've heard about Rife the man, or the therapy he invented. What is it, how do you use it, and how can you get it—now? If you suffer from chronic or serious health problems, it's understandable that you might feel impatient and want answers to these questions immediately. This chapter doesn't talk about Rife or his therapy, though. Why not?

Electromedicine, which includes Rife Therapy, is not routinely used. It's not routinely used because it's not well known. But this doesn't mean it doesn't work. The relative obscurity of all electromedical modalities is due to the overbearing nature of our current medical paradigm.

In order to utilize Rife Therapy properly, it's important to understand the limitations of our medical system and why it has eclipsed other, more effective modalities. Therefore, I ask for your patience as I present the material in a manner to provide you with maximum benefit.

Some of the data that you'll read may surprise, disturb, and even shock you. But only by knowing the truth can we know what we're dealing with in our quest for healing. The truth always helps us make wise and informed choices.

Everyone wants to be healthy. Yet in this modern world, good health seems more elusive than ever. The number of chronic and degenerative diseases, such as arthritis, diabetes and colitis, have skyrocketed. Cancer, which according to the American Cancer Society afflicted only one in 8,000 people living in the United States in 1901, now plagues almost one out of two Americans.¹ Many more people suffer from asthma and food allergies—which, although usually not life-threatening, can substantially interfere with one's quality of life.

Citizens of industrialized countries outside the US have fared better, at least so far. However, with the rapid increase of "fast" food, as well as unwise agricultural practices and pollution worldwide, the prevalence and severity of illnesses outside the US is escalating as well. And many people in non-westernized countries suffer from serious diseases and microbial epidemics, most of which are caused by unsanitary living conditions. Despite our apparent best efforts, viable long-range plans to improve the world's health have not yet appeared. Global illness is an escalating and severe problem.

It's time to change our approach—but so far, the world has been given basically one perspective: the dominant medical model. Do we really have other options?

We do. However, to explore these other options, we need to take a critical look at the existing medical paradigm. Once we understand what went wrong, we can figure out how to make it right. Then, global illness will become global wellness.

DEFINING HEALTH

The word *healthy* comes from an old Anglo-Saxon word meaning “to heal, make whole.” This indicates that health is the ability to function in a unified way, in which all parts and living processes interact with each other in a complex, balanced exchange.

We cannot be robustly healthy in general while some little part of us is very ill, just as individual parts of us cannot be in perfect health while the rest of the body is sick. How many times have you heard, “She was *perfectly healthy* until she came down with cancer”? That “perfect health” didn’t exist. It took *time* for that woman to reach a state of imbalance. Her doctors and family just *thought* she had been well because they were unable to recognize the warning signs that indicated the eventual onset of cancer. The limitations of conventional medical training impeded not only the ability to diagnose, but also to cure.

There are two basic approaches to disease: allopathic (modern Western) medicine, and holistic (complementary) care. Holistic medicine is sometimes called “functional medicine” because it deals with the function and structure of the body, and not just pathology, infection and disease. Most of us have been raised under an allopathic paradigm; but with a little practice, you can expand out of the allopathic world into the wider arena of holism.

Allopathic medicine is concerned with treating disease. It regards the body as a machine that is the sum of its parts. If something breaks, it must be fixed. One way to fix it is to cut out the body part or parts that aren’t working (surgery). Another way to fix it is to give the person a drug that substitutes for the function of the body part or parts that aren’t working. Still another way to fix the body is to numb the person against feeling the uncomfortable symptoms—again, by administering drugs. Drugs are created by extracting individual components from whole herbs, and/or synthesizing chemicals in a laboratory.

Holistic care is concerned with maintaining health. It treats the person as a living entity of interconnected relationships rather than as a carrier of isolated symptoms we call *disease*. The body is a unified organism that is greater than the sum of its parts. If something doesn’t function properly, we need to find out why. Improving function requires a multi-dimensional approach. We must eliminate the poisons that clog the system. We also require the appropriate raw materials to rebuild tissue. These include foods, herbs and perhaps supplemental nutrients. And we might benefit from energetic treatments—in the form of healing electromagnetic fields, electricity, or magnetism—which encourage proper function of cells.

There are times when allopathic medicine does have its place. If a motorist is seriously injured in an

automobile collision, doctors can perform life-saving surgery. If someone does not produce enough insulin (a pancreatic hormone that helps the body utilize blood sugar) and is about to fall into a dangerous diabetic coma, the administration of an allopathic drug can save a life. Emergencies by definition require immediate intervention; we don’t have time to wait for the body’s natural recuperative abilities to start working and create the needed changes. It is wise to acknowledge that sometimes, the body simply cannot heal without a well-timed, externally-generated push.

Degenerative diseases, however, take time to develop. Had the person possessed more biochemical and energetic balance in the first place, s/he would not have reached the point of requiring such drastic intervention. Restorative steps could have been taken initially so there would not be a sudden need for insulin later. With allopathic medicine, invasive behavior is the norm and not the exception. With preventive medicine, there is less need for aggressive intervention because the body’s innate ability to heal is being respected instead of suppressed.

In America, allopathic medicine is called “traditional,” while holistic medicine is commonly labeled “alternative.” But it’s allopathic medicine that is “alternative.” Holistic medicine has existed since ancient times, while allopathic medicine has gained gradual prominence only in the last century.

As part of this attempt at cognitive reversal, allopathic medicine is also called *mainstream* care. Being in the *mainstream* (as compared to an incidental little trickle) implies *main treatment*, which then translates to *treatment of choice*. But one must ask, “*Whose choice?*” Not surprisingly, *mainstream* medicine is heavily promoted by *mainstream* media, which casts holistic care as the “other” or “alternative” modality—and, by implication, as “secondary” or “inferior.” With few exceptions, the media also tries to denigrate holistic care through such misleading terminology as “controversial,” even though the mainstream press itself has reported that about 75% of the United States population has tried some form of “alternative” holistic modality in the past several years. In *Immunization: The Reality Behind the Myth*, Walene James asks:

What is *controversy*? The word itself comes from the Latin meaning “turned opposite.” That which is controversial is turned opposite a dominating structure, in this case, establishment medicine. In a free and open society, there would be no such label as “controversial,” only disagreement within an open forum of ideas and options. There would be no one mainstream but many streams, each meeting different needs.

Likewise with the word *alternative*, as in “alternative” medicine. What if we called [the] Spanish [language] “alternative English”? The ethnocentrism—or is it chauvinism?—would be obvious.²

People conditioned by the Western medical model view it as *the* method of healing; they follow its dictates without question. What if there were more options, models that helped us take responsibility for our health rather than give away our power to question and choose? What if there were models that helped us unearth potential we never knew we had?

The first step, then, to managing disease is understanding what it means to be healthy. What is health? Health reflects an organism’s ability to grow and function at optimal physical, emotional and energetic levels according to its nature. A healthy organism radiates vitality or life force. It assimilates, transforms and redirects life force—either back to itself when necessary, or outside of itself. In biochemical terms, this organism absorbs nutrients, utilizes them for repair, transforms them into fuel for energy, and removes toxic wastes that are a byproduct of metabolism. Emotionally, the individual reaches out to the environment (including other people), absorbs what is optimal for growth, and then gives back to the environment in an appropriate manner, while maintaining appropriate and flexible boundaries.

An unhealthy organism does not radiate vitality. It cannot adequately or efficiently utilize life force for its growth. Lacking energy to give to its environment, it tries to draw energy to itself. When extreme depletion occurs, this state is known as disease, reflecting an organism’s inability to optimally function and grow. Such an individual may also be emotionally restrained.

Randolph Stone, founder of Polarity Therapy, once pointed out that one’s level of health depends on a free flow of energy in the body-mind system:

When these energy currents flow freely without interruption there is a state of balance, . . . [a] freedom of motion and function, called health. . . . Interference in this natural flow of energy manifests as a multitude of pains and symptoms of energy blocks, where the current is short-circuited and broken down. This is called “disease,” named after the structure plus “itis” (inflammation) or “algia” (pain), such as appendicitis, neuralgia or a complete breakdown “lysis,” like in paralysis.³

People out of balance must work harder to maintain themselves. There is less efficiency and enjoyment in everyday activity. Eventually, the decrease of overall

It is much more important to know what sort of a patient has a disease than what sort of a disease a patient has. . . . The good physician treats the disease; the great physician treats the patient who has the disease.

—Sir William Osler
 “Father of Modern Medicine,”
 Canadian physician, historian, author,
 and a founding professor of Johns Hopkins Hospital.
 Creator of the first residency program,
 he brought medical students out of the lecture hall
 to the bedsides of real people for clinical training.
 (1849–1919)

vitality takes its toll: if the imbalance is severe enough, or occurs over too long a period, degeneration begins.

There are different levels of being ill or out of balance. Some common categories are *physical*, *emotional*, *mental*, *energetic* and *spiritual*.

Physical imbalance is the easiest to spot. Nausea, fever, or a sprained ankle may be characterized as physical. Examples of emotional imbalance include unrelieved upset, manic excitement, or uncontrollable rage. A mental imbalance often corresponds with emotional affliction, but disordered thinking such as obsession can be assigned to the mental arena for now. For those focused on practical, concrete reality, energetic imbalances may be more difficult to detect or even accept as factual; but they can be regarded as blockages that prevent limbs, organs, glands, or entire systems in the body from functioning correctly.

The last imbalance on my list, spiritual, can admittedly be difficult to identify. Spirituality is a very personal experience, and it means different things to different people. I define it for myself as “the consciousness of All That Is, that gives people the feeling of love and support through any experience.” An example of a spiritual imbalance is someone who feels depressed, lost or unloved because s/he doesn’t feel connected to a larger community outside of self.

The ways in which these five areas of imbalances overlap are many and complex. In fact, sometimes the structural, biochemical and energetic aspects can be difficult to separate. Acupuncturists who take the client’s energetic pulse, and chiropractors who use kinesiology (muscle testing), are familiar with the relationships between structural weaknesses in the body involving muscles and bones, and imbalances in apparently unrelated organs and glands. For example, an injured ankle may not simply reflect an isolated mechanical injury, but the end result of a weakened digestive system, as the pathways of the liver and gall bladder meridians run on both sides of the foot.

Another example of overlap is a queasy stomach and vomiting—classic physical symptoms of indigestion. However, there may be an emotional component as well.

Let's say a person is feeling upset due to a difficult situation. Neurologically, the message of upset is conveyed via electrical impulses that travel from the brain down the spine to the digestive tract. This causes the stomach to contract, interfering with the flow of digestive juices—which in turn hinders digestion, perhaps even to the point where vomiting may occur. Now add worry to the mix. If the person is obsessing (a mental function) about something upsetting that *might* happen, this “critical mass” of both mental and emotional distress may not only fuel indigestion, but cause the colon to become inflamed (a situation we refer to as a disease called “colitis”).

The biochemical and the neurological are acutely intertwined. In her groundbreaking book *Molecules of Emotion*, neuroscientist Candace Pert reported that receptors to “brain” chemicals called *neurotransmitters* are found not only in the brain, but also in the intestine walls. In fact, about 80% of the body's so-called brain chemical serotonin is produced in the gut! Thus, a “gut” feeling, unexplainable by the rational mind, is experienced literally and viscerally by the gut, and not just in the brain.

Again using the example of indigestion, other energetic pathways may be involved. The major acupuncture meridian that runs vertically down the midline of the body, through the belly, could be overactive or depleted of energy, and thus play a causal role in indigestion. The converse may also be true: injury or a constricted digestive tract, perhaps due to mechanical blockage, can create an imbalance in a meridian where none had existed before.

Finally, spiritual difficulties may play a part in this condition. People who don't feel loved or connected to others tend to be emotionally depressed. The depression may not be conscious, but it depletes the body of vitality. The body doesn't function optimally because there isn't enough energy to nourish all the cells. Collapse occurs, leading to all kinds of physical symptoms. So, even though spiritual imbalance is more conceptually amorphous than the other categories, it's the most encompassing. What began as a presumably simple symptom, indigestion, proves to be a complex, interweaving affair.

Classifying symptoms as belonging to “body,” “mind,” “emotions,” “energy” or “spirit,” is, in a way, reductionist. However, we have to start somewhere in this complex maze of cause and effect if we want to address the imbalance. This *Handbook* focuses (though not exclusively) on the physical body as the primary reference, or starting point, in the vast field that some refer to as mind-body-spirit. When the physical body becomes obviously disrupted, we call the resulting imbalance “disease.” Let's look at the many factors that contribute to illness, so we can get to the roots of the problems and fix them.

HOW WE BECOME ILL

From a holistic perspective, there are “contributors to” disease rather than “causes of” disease, because illness is rarely associated with a single factor. Rather, illness consists of many interrelated factors.

Nutritional Deficiencies

Nutrient starvation is due to poor quality food. Most people eat a diet consisting largely of processed food loaded with chemical additives. In fact, it's debatable whether some items sold to eat should be called “food” at all. A diet guaranteed to cause nutritional deficiencies—literally, the starvation of the body's cells—includes refined or excess sugars; refined carbohydrates (breads, pastries and pasta, made from denatured grains); chemical preservatives, flavorings, dyes, and other artificial additives; unfermented or improperly fermented soy products; soda and fruit juices; so-called junk food (such as manufactured dried snacks and chips); pasteurized and homogenized dairy; and most vegetable oils. A better term for such items is “fake food.” I would also include glutinous grains in this list, even if they are whole and not refined.

Fake foods do more than merely deprive the body of what it needs to thrive. They leach valuable nutrients from every cell. They add harmful toxic compounds, causing even more depletion in the system. And they hinder the body's ability to resist internal and external assaults and injuries. Under these conditions, digestion, absorption and assimilation of even healthful food is difficult. For a detailed discussion of food and diet, see Chapter 3.

Sleep Deficit

It's crucial to get at least seven hours of sleep a night, and preferably at least eight. The body uses the time to repair itself. Waste removal continues even more efficiently because tasks that are normally done during waking hours have been set aside. Vital functions such as heartbeat and respiration slow to a minimum. Even the brain is working to restore itself and promote memory retention.

Illness, nutrient starvation, hormonal problems, and irregular lifestyle habits can all contribute to a lack of sleep. Conversely, when we don't get enough sleep—and especially if sleep deficit continues over a period of even a few days, not to mention months and years—we lay the foundation for vastly reduced functioning, and even illness.

For a detailed discussion on the benefits of sleep, the effects of sleep deprivation, and suggestions on how to get a good night's sleep, see Chapter 3.

Oxygen Insufficiency

Oxygen scarcity is a serious problem. Not only would we die without it, but our tissues require oxygen for repair. As most pathogenic microbes thrive in an anaerobic (oxygen-deprived) environment, oxygen deprivation has serious consequences on many levels.

Some people who visit high altitudes—say, 5000 feet or higher above sea level—suffer from what is referred to as “altitude sickness” due to the lack of sufficient oxygen. Symptoms include heart palpitations and pain, migraine, insomnia, nausea, weakness, fatigue, and even fluid in the lungs in the most serious cases. A habitual lack of deep breathing (often due to the repression of painful emotions, discussed later in this section) also contributes to a lack of sufficient oxygen in the system.

In the United States, oxygen is sometimes administered to help ease conditions such as asthma and emphysema; and hyperbaric oxygen is (less often) utilized to help people recover from injuries and neurological damage. However, in many countries outside the US, the more powerful and sophisticated relatives of oxygen—ozone therapy (using pure medical grade ozone) and food grade hydrogen peroxide—are regularly employed for many different kinds of infections. Each provides significant benefits when used properly. Chapter 3 discusses in detail the history of oxygen therapies, how and why they work, and in many cases, how to administer them yourself.

Chemical Toxicity

Toxin literally means “poison.” Any substance that stresses the system’s biochemistry to the extent that cell structure and organ function are negatively affected, may be considered a poison. We call some of these foreign chemicals “drugs”—but there are literally tons of other chemicals that are so commonplace in our daily lives, and thus regarded as so normal, that many people don’t consider them dangerous. These chemicals enter the body through the skin, respiratory tract and gastrointestinal tract. The following data from *The Holistic Handbook of Sauna Therapy* describes just a few of the dangerous chemicals in our environment.

- ◆ *Benzene*. In cigarette smoke, gasoline, inks, oils, paints, plastics, rubber, detergents, explosives, pharmaceuticals and dyes. One study estimates that 45% of benzene exposure comes from cigarettes, including exposure to secondhand smoke.
- ◆ *Chloroform*. In cleaning solvents, floor polishes, insecticides, artificial silk and lacquers.

- ◆ *Dichlorobenzene*. In deodorants, insecticides, metal polishes, moth proofing, lacquers, and paints.
- ◆ *DDT (dichlorodiphenyl-trichloroethane)*. A highly toxic pesticide, it was outlawed in the United States in 1972, but can still be found in soil and other substances, including carpeting.
- ◆ *Formaldehyde*. In nearly all indoor environments: foam insulation, particle board, pressed wood products, grocery bags, waxed papers, facial tissues, paper towels, wrinkle resisters, adhesive binders in floor coverings, backings on carpet, even cigarette smoke.
- ◆ *Hexane/Heptane/Pentanes*. In glue, cement, adhesives, paint thinner, plastics, gasoline, ink.
- ◆ *Toluene*. In petroleum products, carpets, carpet glue, copy paper, paint.
- ◆ *Trichloroethylene (TCE)*. More than 90% of the TCE produced is used in dry cleaning and metal degreasing. The remainder is in printing inks, lacquers, varnishes, adhesives and paints. The National Cancer Institute lists TCE as a liver carcinogen.
- ◆ *Xylene*. In rubber, paint, ink, photo processing, plastics, insecticides, petroleum products.⁴

It’s impossible to avoid chemicals. “Our bodies act like sponges, absorbing the chemicals to which we are exposed,” write the authors of *Natural Detoxification*. “Water-soluble chemicals are absorbed and then excreted [but] fat-soluble chemicals accumulate in our fat cells and cell membranes. . . . When the body is under stress”—as during illness, emotional anguish, or nutrient deprivation—“it releases these chemicals from the fat to circulate in the bloodstream. Later, these chemicals will return to the fat cells and cell membranes, to be released another time. The release and return cycle of these chemicals continues indefinitely unless we help our bodies rid themselves of toxins.”⁵

A study on chemicals found in the human body states: “Over four million distinct chemical compounds have been reported in the literature since 1965, with 6,000 new compounds added to the list each week. “More than 3,000 chemicals are deliberately added to food and over 700 have been identified in drinking water. . . . Over 400 chemicals have been identified in human tissues, with some 48 found in adipose [fat], 40 in [breast] milk, 73 in the liver, and over 250 in blood plasma.”⁶ Less than half of these toxins have been approved by US government agencies.

The negative effects of toxic chemicals are outlined in Appendix F. Sauna therapy, along with other methods to help eliminate this toxic load, are discussed in Chapter 3.

Electron Deficiency

Charged subatomic particles called *electrons* provide energy to every cell in the body. One doesn't normally think of electrons as nutrients, but they are—because in many ways, our bodies are electrical circuits. Part of a cell is like a semi-conductor: it *conducts* electricity. The cell membrane is a capacitor: it *stores* electricity. The membrane is also a liquid crystal resonator that *detects and receives specific signals* (frequencies). Cells also emit radio waves, microwaves, infrared waves, and biophotons.

If a cell membrane is not recharged, the entire cell starts to malfunction. *Chronic disease is always associated with a loss of electricity (electrons)*. Note that if the thyroid gland—which is the body's metabolic engine—is underactive, the body cannot store enough charge and thus has a difficult time maintaining good health.

Electron *stealers* include dry wind, synthetic fabrics in clothing, negative emotions, a diet of fake food, and electrosmog (see Insert, “Electromagnetic Fields and Your Health”). Electron *donors* include moving water, natural fibers, positive emotions, a diet of raw organic vegetables and sprouted seeds, and biocompatible electromedical devices. Walking barefoot on soil, sand, rock or vegetation—as opposed to concrete, vinyl or carpet—is another way to receive free electrons from our planet Earth that's constantly recharging us.

Electromagnetic Toxicity

To many people, the word “toxin” means dangerous environmental pollutants and chemicals such as pesticides, fake foods and drugs. While chemicals certainly burden the body and prevent it from functioning properly, harmful electromagnetic (EM) fields are another, very real, and often hidden source of environmental pollution that can cause unlimited damage and even death. Some EM fields are benign or beneficial, but the majority are destructive. Of these, most are not naturally occurring; and they're caused by electronics. EM pollution is the new disease of the 21st century. For details, see Insert, “Electromagnetic Fields and Your Health.”

Weather Challenges

Weather has a profound effect on living organisms. Twenty percent of the population is estimated to be especially sensitive to certain types of weather. However, based on my personal experiences and observations, I believe that the percentage is higher—even though people may not always recognize what it is to which they are reacting.

There are many weather-related causes of discomfort and even ill health. The most obvious are extreme levels of dryness or humidity, heat or cold. (Not everyone, though, agrees that intense cold is harmful. Dutchman Wim Hof has developed a program involving breathing exercises

and repeated exposure to cold water for increasingly long periods. Scientists have found that developing the body's tolerance to cold restores mitochondrial and tissue function, improves immunity, decreases inflammation, alkalizes the blood, and activates the burning of fat. See wimhofmethod.com for more information.)

Thunderstorms are especially problematic for some people and many animals, who respond adversely to the excessive prior buildup of positive ions in the air—not to mention

the often sudden changes in barometric (air) pressure. People with arthritis are especially susceptible to changes in barometric pressure. Sensory nerves in their joints (which lack the normal cushioning from cartilage) hurt when the atmosphere changes from dry to moist, as during a storm.

Weather conditions determine the presence or absence of electrons. Moving air (such as a dry desert wind) steals electrons from the body, while moving water (such as a waterfall) replenishes electrons. Dry wind can exacerbate or outright cause asthma, hay fever and similar conditions because positive ions cause an increase in stress hormone production. Conversely, negative ions contribute to an increase in feelings of well-being and more rapid recovery from illness. Sunspot activity increases solar wind, which causes magnetic storms in the Earth's atmosphere that adversely affect the magnetic fields in our bodies. Lack of sufficient sunlight causes depression (see Chapter 3, **Light and Color**, for an in-depth discussion).

Getting Well Without the Doctor's Help

Many amazing reports have been recorded and continue to be recorded, in the lore of progressive cancer treatment. The medical establishment handles these in one of the following ways:

1. They are ignored;
2. They are explained as “anecdotal,” implying that they are lies [or they don't count, since the doctor had no control over the outcome];
3. They are said to have undergone “spontaneous remission,” i.e., unexplained recovery (this means the doctor has no idea what happened);
4. They are said to have recovered from the delayed effects of conventional (allopathic) therapy, which was administered weeks or months before the progressive therapy.

—Ron Kennedy, MD
July 2000

Electromagnetic Fields and Your Health

A Crash Course on the Electromagnetic Spectrum

There are many types of electromagnetic (EM) fields, collectively known as electromagnetic radiation. In this nuclear age, when one hears the word “radiation,” it’s easy to think of a dangerous nuclear powered reactor. *Radiation*, however, is simply of energy emitted by a source—whether that source is a nuclear power plant, the sun, or an electrical socket. Radiation can be harmful, beneficial or neutral.

The EM spectrum consists of energy oscillations, or *frequencies*, that comprise our (conventionally) known universe. Slow-moving EM radiation has longer wavelengths and fast-moving EM radiation has shorter wavelengths. These wavelengths are measured in cycles per second, or *Hertz* (abbreviated *Hz*). A given amount of space that contains a single low frequency can contain many high frequencies, as high frequencies have shorter wavelengths.

Electromagnetic energies include different types of electricity, radio frequencies (a huge category that’s further divided into AM radio, FM radio, TV and microwaves), infrared radiation (which includes a narrow band of far infrared), visible light, ultraviolet, X-rays, and gamma rays. Even though these energies seem unrelated to each other, and we typically think of them as separate phenomena, it’s important to understand that all EM radiation exists along a *continuum*. The various EM wavelengths exhibit different characteristics—and we use them differently—according to how quickly or slowly they’re oscillating. A chart of the EM spectrum is on the next page.

Most EM wavelengths are invisible to the human eye, and are usually undetectable to our other senses. For example, we cannot see radio waves, microwaves, infrared or ultraviolet radiation. However, the small section (band) of the electromagnetic spectrum that we can see, we call “visible light.”

Electricity and magnetism are intimately related to each other. Wherever there’s a flow of electrical current, a magnetic field is present; and wherever there’s a magnetic field, it’s possible to create an electrical current. The bodies of humans and other living things contain both electrical and magnetic energy.

EM energy can be natural or artificially produced. For example, the EM radiation that’s emitted by our sun, and which travels through space and Earth’s atmosphere, occurs naturally. It has very different properties than the more concentrated, artificially created electromagnetic fields that bombard us on a daily basis. It’s this human-made energy, which we deliberately produce and harness, that will be our focus.

Harmful EM Fields vs. Healing EM Fields

Not all EM fields are dangerous. In fact, many are biologically necessary. Take, for example, certain *far infrared radiation* (FIR) wavelengths, which comprise a very narrow subset of the much larger *infrared* wavelength category that produces heat. We would die without these FIR wavelengths. Readily absorbed by water, these rays promote vital life processes such as egg hatching and cell division. (This is one reason a FIR sauna can be healing, in addition to its function of helping the body sweat to excrete toxins.) Another example of beneficial EM radiation is the minuscule amounts of electrical current (*microcurrent*) produced by the human brain and nervous system, which allows various parts of the body to communicate with each other. A third example of healing EM radiation is a particularly narrow band of *ultraviolet light* (within the larger category of UV light), which acts as a disinfectant and is healing for the eyes and skin.

Detractors of legitimate research like to cite the sun as a natural EM radiation source. They correctly point out that the sun is constantly transmitting EM radiation—radio frequencies, microwaves, and other wavelengths—thus attempting to minimize the dangers of certain EM fields. However, naturally-occurring solar radiation is different from human-made electrosmog. Radiation from the sun is *diffuse*, whereas electrosmog radiation is *coherent* and *concentrated*: one must purposely create, augment, focus, and direct electrons to turn on a light bulb. We evolved under natural, diffuse solar radiation, not the unnaturally concentrated and bombarding radiation from electric lights and other electrical devices. Moreover, our daily exposure today is over a million times higher than the levels of background EM radiation under which we evolved. Put another way:

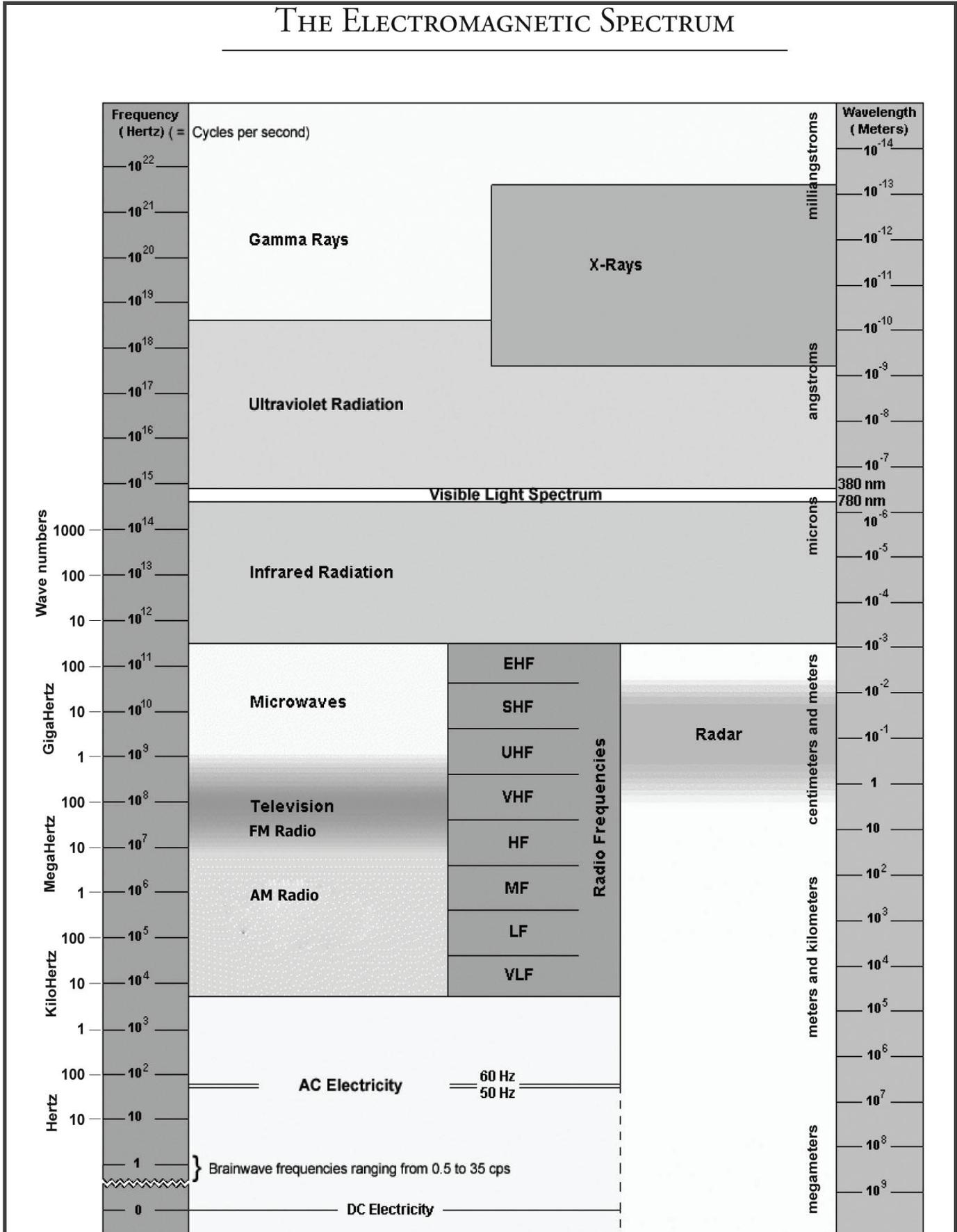
Harmful EM Fields

- ◆ Signals are chaotic, sporadic, and inconsistent.
- ◆ Frequencies are in the range of living cells; combined with the chaos of the signal, they disrupt cellular function.
- ◆ Remove electrons from the body, thus supporting the propagation of free radicals.

Healing EM Fields

- ◆ Signals are coherent, regular, and uniform.
- ◆ Frequencies may be in the range of living cells, but wave coherence makes them compatible with living organisms.
- ◆ Add more electrons to the body, thus helping to inhibit free radicals.

THE ELECTROMAGNETIC SPECTRUM



To summarize, the effects of EM radiation depend on:

- ◆ *Where on the EM spectrum* the wavelengths exist—in other words, *what type of wave* it is.
- ◆ The *concentration*—coherence vs. diffusion—of these wavelengths.
- ◆ The *voltage or force* with which these wavelengths interfere with bodily functions.
- ◆ *How* that radiation is being *transmitted and administered*.
- ◆ *Proximity* of the individual to the source of the field.

All of the above circumstances can literally make the difference between wellness and illness, life and death.

Harmful EM Fields

The Science

Starting from the high-frequency end (top) of the EM spectrum chart, there's *ionizing radiation* (which mainly consists of gamma rays and X-rays), and *non-ionizing radiation* (everything else). Ionizing radiation contains so much energy that it emits single, unbound, unstable electrons called *free radicals*. In an effort to become stable, the free radicals attach themselves to the outer rings of atoms in your body, which in turn displaces your own original electrons—and creates more free radicals in a chain reaction. Free radicals cause major tissue and DNA damage. Ionizing radiation is known to be radioactive, so its harm is generally no longer disputed.

The Politics

Deliberately perhaps, many of the published studies on harmful EM wavelengths have focused on ionizing radiation (gamma and X-rays). In many parts of the world, the dangerous, complex biological effects of non-ionizing radiation have been ignored, trivialized or denied—either due to ignorance, or (more likely) the deliberate manipulation and withholding of scientific data. Many people perceive our everyday electronics (such as cell phones) as so indispensable to our comfort, lifestyle and even survival, that they'd rather overlook the serious health problems that these fields can cause.

The Terminology

Artificially produced electricity that produces harmful EM fields can be either wireless or wired. Here, we will mostly be addressing the non-ionizing frequencies from 0.1 Hz to 300 GHz. This harmful radiation is popularly known as "EMF," short for *electromagnetic fields* (not the engineering term *electromotive force*). Even though the phrase "electromagnetic field" is technically neutral, its designation of harm has become fixed in the popular lexicon. "EMF pollution" is more precise. However, to promote greater accuracy and avoid confusion, I will use the term *electrosmog* (sometimes called *dirty electricity*).

What These Harmful EM Fields Are

Almost everything that runs on electricity emits harmful radiation. From the lowest frequencies to the highest, the wavelengths are:

- ◆ Alternating Current (AC) Electricity, in the Extremely Low Frequency (ELF) range
- ◆ AM and FM Radio Frequencies
- ◆ Television Rays, including Ultra-High Frequency (UHF) and Very High Frequency (VHF)
- ◆ Microwaves

The higher the "G" (generation) rating—1G, 2G, 3G, 4G, and most recent, 5G—the more harmful the technology.

Specific Electrosmog Wavelengths

Extremely Low Frequencies (ELF) in the Alternating Current Electricity Range

How It's Produced. Basic electrical current—the kind we use in our everyday lives—can be produced in two different ways, and they don't affect the body in exactly the same ways.

Thomas Edison, inventor of the incandescent light bulb, developed *direct current* (DC). With DC, there's a steady flow of electrons (current) in one direction. However, Edison found that the current couldn't travel very far without dissipating. This made it necessary to build massive converter boxes at regular locations to increase the force of the flow and propel the electrons forward. Hence, DC was both impractical and costly.

In response to the difficulties of DC, Edison's rival Nikola Tesla (well known for his "free energy" inventions and use of electricity in novel ways) developed *alternating current* (AC). AC electricity travels long distances. To do this, each electron travels a short distance, bumps adjacent electrons, and then returns to its original position. In turn, the adjacent electrons bump electrons next to *them*, return to their original position, and so on. This constant bumping of electrons causes a flow of current through a wire. However, because the direction of the electron flow reverses repeatedly, every time the electrons change direction the field collapses and reappears. The overall charge changes from negative (signifying the presence of electrons) to positive (due to the relative absence of electrons). This back-and-forth direction of electrons disrupts the biological processes in a living body. Also, whereas DC creates a steady magnetic field, AC creates a fluctuating magnetic field, of varying strength, each time the electrons reverse direction—which is likewise disruptive. You might analogize DC as a gentle, steady, continuous stream of water, while AC is the relentless, irregular crash of ocean waves pushing and pulling. DC is gentle to living systems, while AC is destructive.

Biological Effects of AC. Touching the wires or being in the field of any electrical current (DC or AC) can maim or kill you if the power is too high. However, AC is dangerous in another way, at lower power levels that we routinely use. The extremely low frequencies (ELF) in electrical sockets and wiring range from 0.01 Hz to 300 Hz. These are the same ranges in which human tissue oscillates. For example: signals from a low-frequency WiFi pulse are in the same range as signals used by the brain and nervous system, so the brain tries to lock on to WiFi signals and becomes confused. Also, the body of a human (or animal) resonates with, or becomes *entrained* to, the fields to which it's exposed. Thus, when people touch or are near an electrical appliance operating at 60 Hz (in North America) or 50 Hz (in most of the world), that same field is generated in us. Furthermore, electrons flowing through a wire produce magnetic fields, which cause even more problems than electrical current because they affect the iron in the blood and elsewhere, destroying cell membranes and interfering with our electrolytes. Electrosmog crosses the blood-brain barrier, so there's no natural protection in our brains against its effects. And it changes the rotation and spin of electrons in our bodies, altering the chemical bonds of molecules and causing breaks in our very DNA.

This literal change in our DNA has far-reaching repercussions. The nervous system can't process signals properly. Hormone production, calcium exchange and tissue growth are skewed. The pineal gland (which is sensitive to even minute changes in electromagnetic fields) reduces the amount of the hormone melatonin that it synthesizes and secretes. Melatonin is not only required for restorative sleep, but it also helps regulate growth and the cycles of other hormones. And it supports immune function and inhibits the growth of tumors. A melatonin deficiency diminishes one's ability to learn, and is even responsible for depressive states along with sleep disorders and fatigue. The effects of electrosmog on the pineal gland alone account for health problems almost too numerous to count.

It's easy to see why ELF is so dangerous. *Electrical devices overpower the body's natural electromagnetic oscillations, forcing us to resonate in ways that prevent our biological processes from optimally functioning.*

The Swiss Agency for the Environment, Forests and Landscape (SAEFL) acknowledges that certain biological effects occur at exposure levels well below internationally recommended limits—and that as a result, it's wise to take precautions to protect oneself from the damage caused by ELF radiation. Most people don't know that even an electrical socket, with nothing plugged into it, carries "live" electricity that can cause destructive biological effects—particularly if the socket is next to the body for a long time (as in a socket at the head of a bed, where you sleep for the entire night).

Radio Frequencies (RF) and Wireless (WiFi)

Higher up on the EM spectrum are radio frequencies or RF. As with the lower EM bands, radio frequency wavelengths contain both electric fields and magnetic fields. For many years, scientists have known that high levels of RF radiation are harmful because RF can rapidly heat biological tissue (the principle by which microwave ovens cook food), and the body is unable to dissipate the excessive heat. This is especially true of areas such as the eyes and testes that lack substantial blood flow.

Scientists refer to the damage caused by heating from RF as *thermal* (temperature-related) effects. While technically correct, this phrase is misleading because it can imply that if tissue's not heated, there's no damage. But radiation produce significant, sometimes lethal *nonthermal* damage—common with wireless technology or WiFi, which broadcasts in ultra-high frequency bands.

Wireless technology includes internet routers, modems, mobile phones, Bluetooth, cell phones and their towers. WiFi damages the heart as well as the nervous system, which means a higher incidence of heart attacks and neurological disorders including concentration and cognition difficulties. Cell phone radiation causes DNA damage, resulting in inflammatory conditions, infertility, heart disease, and cancer. Brain tumors typically appear on the side of the head favored during cell phone conversations. A phone in a breast pocket increases the chances of breast cancer and heart problems; in a side pocket near the groin area, cell phones promote infertility. WiFi against the body causes a rapid deterioration of health; but even WiFi near a person causes considerable damage. It's even making bees desert their hives. And the newer proposed "5G" WiFi is just as dangerous. Resonating in the frequency of sweat glands, it prevents people from perspiring.

Sensitivity To Electrosmog Escalates

Sensitivity to electrosmog is known as *electrosensitivity*. People who are bothered by electrosmog are known as *electrosensitive*. Electrosmog damage is exponential. Repeated, unremitting exposure exacerbates any underlying weakness and causes new health problems to arise, including degenerative conditions and increased susceptibility to infectious diseases. The dangers of electrosmog been known since even before the 1960s.

A good health practitioner investigates a client's environment. This includes exposure to not only chemicals, but also to electrical and magnetic fields. People may need to rewire their house or unplug appliances (particularly those near their bed)—or even move to a different home entirely to avoid nearby cell towers and major power lines. There are many reports of both humans and their pets developing similar conditions, including cancer. Once the electrosmog is eliminated, the people and animals become well.

Health Problems Worsened or Outright Caused by Electromog

- ◆ Allergies of all types
- ◆ Arthritis, including rheumatoid arthritis
- ◆ Autoimmune disorders, including Multiple Sclerosis and lupus
- ◆ Birth defects, genetic abnormalities, infertility, miscarriage, problem pregnancies, stillborn births
- ◆ Blood sugar problems, including “brittle” diabetes
- ◆ Cancers, including brain tumors and leukemia
- ◆ Cardiovascular problems: increased incidences of heart attacks, chest pain, erratic pulse, high blood pressure
- ◆ Digestive disturbances, including poor absorption of food, leaky gut, nausea, and vomiting
- ◆ Emotional distress, including excessive anxiety, irritability, mood changes and panic attacks, along with a higher-than-average suicide rate
- ◆ Ear problems, including noise sensitivity and tinnitus
- ◆ Eyestrain, deteriorating vision, cataracts
- ◆ Fatigue, excessive and unremitting
- ◆ Fibromyalgia, chronic pain, excessive inflammation
- ◆ Headaches and migraines
- ◆ Hormonal abnormalities of all kinds
- ◆ Immune malfunction, resulting in abnormally high levels of infections and inflammation
- ◆ Insomnia and other sleep disturbances
- ◆ Infections, all, increased or exacerbated (pathogens go into “alarm” mode when exposed to electromog)
- ◆ Nervous system disorders: confusion, convulsions, dizziness, hyperactivity, memory loss (including Parkinson’s and Alzheimer’s), seizures
- ◆ Respiratory issues, including asthma
- ◆ Skin disorders: burning, tingling, rashes, pain
- ◆ Stress increase and intolerance, in part due to adrenal gland impairment

Contributors to Electromog Sensitivity

- ◆ Electromog exposure that’s cumulative, over a long period of time
- ◆ Electromog exposure at dramatically high levels (either a single exposure, or several exposures)
- ◆ Health issues that are pre-existing
- ◆ Heavy metal toxicity
- ◆ Immune impairment
- ◆ Iodine deficiency
- ◆ Lyme disease, and any other illness (such as cancer) that has substantially impaired immune function
- ◆ Stress—either high levels, or repeated (how much stress, and what kind, depends on the individual)

Common Electrical Items that Produce Electromog

- ◆ Air conditioner
- ◆ Airport scanner (well known to emit dangerous ionizing radiation from high-intensity X-rays)
- ◆ Chargers for cell phones, laptops, tablets, etc.
- ◆ Clock, clock radio
- ◆ Clothes dryer
- ◆ Computer, monitor, printer, scanner, photocopier
- ◆ C-PAP machine (used for sleep apnea)
- ◆ DVD or Blu-Ray player, amplifier
- ◆ Electric blanket, water bed
- ◆ Fan (on floor or ceiling, and in computers)
- ◆ Hair dryer, curling iron
- ◆ Heater (portable)
- ◆ Hot plate
- ◆ iPad, iPod, Android, Kindle, any portable reader
- ◆ Iron (for clothing)
- ◆ Kitchen appliances: blender, dishwasher, food processor, mixer, electric oven/range, refrigerator, toaster, microwave oven (in the Gigahertz range)
- ◆ Light bulb, especially compact fluorescent (emits RF and UV, and contains mercury)
- ◆ Phones: cell, cordless, bluetooth, answering machine (corded is safer; it doesn’t constantly transmit signal)
- ◆ Power tools: drill, saw, electric screwdriver
- ◆ Shaver (electric razor)
- ◆ Smart meter (allegedly installed to regulate electrical usage, it’s highly dangerous and inaccurate)
- ◆ Television and radio transmitter
- ◆ Stereo equipment and amplifier
- ◆ Vacuum cleaner
- ◆ Washing machine
- ◆ ...living near a cell tower, high-voltage power line, transformer station, railway, or radar installation

Just A Few Scientific Sources (also see Appendix I)

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What To Do About Electrosmog (Dirty Electricity)

Make Sure Your Electrical Wiring and Outlets Have Been Properly Designed and Installed

Faulty wiring causes intense stray magnetic fields. These magnetic fields often appear in homes that have been built on a budget (and quickly), and in buildings erected before the 1960s, which used crude wiring methods. Magnetic fields result from a lack of shielding, improper grounding, or both.

Shielding refers to the various ways in which electrical wiring is physically covered with various materials, or configured so that stray magnetic fields are eliminated. *Grounding* means that the excess charge (electrons) from wiring are returned to the ground or soil (Earth), thereby eliminating the possibility of short-circuiting or harming a living body with stray current.

A *gauss meter* measures magnetic fields. A meter measuring only field strength costs under two hundred dollars; more expensive ones detect the frequencies as well. An *outlet tester* shows whether that socket is properly grounded, and costs less than ten dollars.

If you live in an old house or sense that your illness could be due to electrosmog, call a licensed electrician who can inspect and clear your environment.

Avoid Close Proximity

Electrosmog is significantly higher in equipment that emits strong magnetic fields. This includes appliances that generate lots of heat (broilers, hair dryers, hot plates), that contain magnetic coils or transformers (TVs, low-voltage halogen and fluorescent lamps, clock radios), or are equipped with electric motors (drills, blenders, vacuum cleaners). Limit the time you spend with them. Note that as the distance from the source of a magnetic field increases, the intensity of the field exponentially decreases. So, depending on the item, keep it between one foot (about 30 centimeters) and three feet (60 or 90 centimeters) away. Magnetic fields penetrate solid objects, so be aware of what's on the other side of a wall, especially the wall at your bed.

- ◆ Turn off or unplug surge protectors and equipment that you're not using. Even when off, appliances consume electricity and still produce magnetic and electric fields. Install a *demand switch* to automatically turn off unused electrical currents.
- ◆ You can't avoid wireless from public facilities or neighbors, but you *can* control your home. Don't use wireless Internet! (Wired Internet is faster anyway.)
- ◆ Use your cell phone on speaker or with a wired (not Bluetooth) headset. *When not using it, turn it off.*
- ◆ Don't put a laptop, tablet or cell phone on your body.
- ◆ Engines on trains, cars and planes produce strong magnetic fields. An enclosed metal structure can intensify electrosmog. See next column.

Equipment and Tools to Shield, Protect and Normalize

The new 5G wireless technology resonates in the wavelength of our sweat glands—which are like antennas for 5G—and can thus interfere with our ability to sweat. Even if you don't own a cell phone, you'll absorb the radiation simply by being near a 5G cell tower. Few people will be able to avoid sources of electrosmog, so protective tools seem mandatory.

Products either *shield or block* radiation, or *harmonize or neutralize* the radiation so that it no longer causes problems. Some of the products are placed around or on an electrosmog-emitting appliance (cell phone, computer, etc.), while others are worn or placed on the body. A few items run on electricity; most do not. The protective ability of some products is shown with "before" and "after" photos of live blood taken through a darkfield microscope. While exposure to a cell phone will produce abnormally flattened, clumped red blood cells (indicating low voltage and oxygen levels), photos after exposure to an EMF protector/neutralizer will show normal separate, round blood cells (indicating higher voltage and oxygenation). Other tests include Kirlian photography, Gas Discharge Visualization (GDV), and of course whether one's health improves.

Make sure the product doesn't absorb harmful radiation. If you don't know when to clear it, you could absorb electrosmog from the very tool you're relying on to protect you. Below, a small sample of EMF protectors.

Items that Shield. Some materials block stray magnetic and electric fields. These include rare earth, a mineral; Mu metal, an alloy used to shield electronic components; and fabrics and paints imbued with materials that reflect or ground radiation. See lessemf.com.

Items that Harmonize or Neutralize. Jewelry, decals, and pocket-size items made of stone, metal or ceramic can be imbued with frequencies; and some liquids and solid materials (especially in crystalline form) can be imprinted. Some tools passively emit an energy field that transforms the chaotic electrosmog into more organized, gentler wavelengths. Others directly strengthen one's energy field and help the body withstand the harm from electrosmog. Some products that may help are made by Aulterra, Earthcalm, Energyintegrity, Eradicator Technologies, and Tuning Element (see Appendix A).

The Pulsed Technologies electronic VitaSet Generator emits all of the Schumann Resonances, including the best-known 7.83 Hz. Humans originally evolved and resonated to these frequencies (see Chapter 5). According to Dr. Patrick Flanagan, iron oxide powder (sold as jewelers rouge) emits 7.83 Hz when exposed to an EM pulse. Three tablespoons mixed in a gallon of paint or glue, and applied in small amounts to a cell phone, computer, light or appliance, will focus the body on this restorative resonance instead of electrosmog.

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FDA Scientists Feel Pressured To Lie

The Union of Concerned Scientists (UCS) . . . released survey results that demonstrate pervasive and dangerous political influence of science at the Food and Drug Administration (FDA). Of the 997 FDA scientists who responded to the survey, nearly one-fifth (18.4%) said that they “have been asked, for non-scientific reasons, to inappropriately exclude or alter technical information or their conclusions in a FDA scientific document.” . . .

The UCS survey, which was co-sponsored by Public Employees for Environmental Responsibility, was sent to 5,918 FDA scientists. Forty percent of respondents fear retaliation for voicing safety concerns in public. This fear, scientists say, combines with other pressures to compromise the agency’s ability to protect public health and safety. More than a third of the respondents did not feel they could express safety concerns even inside the agency. . . . [Also:]

- ◆ 61% of the respondents knew of cases where “Department of Health and Human Services or FDA political appointees have inappropriately injected themselves into FDA determinations or actions.”
- ◆ Only 47% think the “FDA routinely provides complete and accurate information to the public.”
- ◆ 81% agreed that the “public would be better served if the independence and authority of FDA post-market safety systems were strengthened.”
- ◆ 70% disagree with the statement that FDA has sufficient resources to perform effectively its mission of “protecting public health . . . and helping to get accurate science-based information they need to use medicines and foods to improve their health.”

To address the concerns raised by FDA scientists, UCS recommends:

- ◆ **Accountability.** FDA leadership must face consequences if they side with commercial or political interests and not with the American people.
- ◆ **Transparency.** Scientific research and reviews should be open so any undue manipulation is immediately apparent.
- ◆ **Protection.** Safeguards must be put in place for all government scientists who speak out.

—Union of Concerned Scientists

“FDA Scientists Pressured to Exclude, Alter Findings; Scientists Fear Retaliation for Voicing Safety Concerns”

July 20, 2006

Hospital Infections

Back in 1986, Colbin reported “the most rapidly spreading epidemic of the 20th century,” citing “over 2 million infections a year” in American hospitals, that resulted in “60 to 80 thousand deaths.”³⁸ Data analyzed in 2002 by *The Chicago Tribune* from patient databases, court cases, 5810 hospitals, and 75 federal and state agencies, found “103,000 cases of death due to hospital infections, 75% of which were preventable.” [original emphasis]³⁹ By 2011, according to the Centers for Disease Control, the number of hospital-acquired infections (in hospitals solely devoted to acute care) had escalated to 722,000. Almost ten percent of those infected, died.⁴⁰

Deaths from Surgeries and Tests

Colbin wrote that an “estimated 2.5 million operations a year are performed without real medical need, resulting in some 12 thousand needless deaths.”⁴¹ Statistics compiled by Null and colleagues two decades later gave comparative numbers for unnecessary surgeries. In 1974, 2.4 million unnecessary surgeries were performed annually, resulting in 11,900 deaths. In 2001, 7.5 million unnecessary surgical procedures were performed, resulting in 37,136 deaths.⁴²

Combined Statistics

In 2003, Null et al. wrote that the total number of iatrogenic deaths yearly, in hospitals, is 783,936. The deaths were surgery-related, and were due to adverse drug reactions, (unspecified) medical error, bedsores, infection, malnutrition, and useless procedures. “We could have an even higher death rate by using [another statistician’s differently calculated] . . . medical and drug error rate of 3 million. . . . *The American medical system is the leading cause of death and injury in the United States.*” [emphasis added]⁴³

Is “Death By Medicine” still relevant? Consider this: a 2010 *New England Journal of Medicine* article found that 18% of people admitted to hospitals were injured by medical care (some repeatedly); over 63% of the injuries could have been prevented; and in about 2.5% of the cases, the problems caused, or contributed to, death. “We found that harms remain common, with little evidence of widespread improvement.”⁴⁴ An article in the September 2013 issue of *Journal of Patient Safety* pointed to another grim statistic: each year, between 210,000 and 440,000 people who are admitted to the hospital suffer some type of preventable harm that contributes to their death.⁴⁵ An even more recent statistic is in the Sidebar on page 26.

Do you have confidence in a hospital stay if you get sick?

DEATHS AND INJURIES FROM MEDICAL DEVICES

Medical devices include items placed inside the body (such as breast implants, replacement limbs and pins, bone grafts, pacemakers, and mesh used for patching internal holes), and products used externally (such as medical scanners, ventilators, infant resuscitators, insulin pumps, and defibrillators). Ordinarily, we might not consider that medical devices belong in the same category as unsafe prescriptions. But medical devices can be as injurious as pharmaceuticals. In the last several years especially, a number of well-known manufacturers have been sued for issuing devices and implants that were either defective, or made with substandard parts—which resulted in serious injuries or death. Pathogens on improperly sterilized instruments, such as duodenoscopes (which allow viewing of the stomach), also contribute to deaths.

According to the FDA's own website, each year the agency receives "several hundred thousand medical device reports of suspected device-associated deaths, serious injuries and malfunctions."⁴⁶ "Several thousand" is a lot of reports. Typically the FDA recalls defective products, but hospitals and individual doctors are allowed to decide if they want to stop using the products. Sometimes they don't. Let's review just a few devices in the past few years that have malfunctioned:

- ◆ A 2007 NBC News report on heart stents (used to widen blood vessels ridden with scars or plaque) called these devices "time bombs,"⁴⁷ because they irritate the body, causing scar tissue—thus exacerbating the very problem for which they were installed. People ended up taking blood thinning medications anyway.
- ◆ In 2012, the death certificate of a Boston, Massachusetts man initially indicated that he died from throat cancer. But it was later determined that too much morphine had dripped into his system all at once, due to a breakable plastic clip in his medicine dispenser that was supposed to regulate the flow of medication. A manufacturer's representative assured the hospital that although a new clip was needed, it was still safe to use the device. The item had been assigned a "Class 1" recall by the FDA—a useless regulation, because even with this most strongly worded recall it's not necessary to discontinue using a product that has been proven to cause injury or death.
- ◆ In 2013, a company called GE Healthcare was forced to tell customers to stop using more than 20 models of its nuclear imaging devices after some bolts became dislodged from one of its machines and killed someone.

FACTS AND FALLACIES ABOUT CLINICAL TRIALS

Standard scientific protocol for the early stages of drug testing involves inducing illness in two matched groups of animals. The researchers deliberately don't intervene in the first group (*control* group) to make sure that the disease really would have disabled or killed them. However, the researchers administer the experimental drug or treatment to the second group (*test* group) to see how many of those animals will live.

The ways in which drugs are tested have so many flaws that test results are not only misleading, but often invalid. In the next several pages, I will discuss a few practices that can lead to some glaringly inaccurate conclusions about the effectiveness and safety of drugs.

A Human is Not a Lab Rat

In the United States, scientists heavily rely on animals to test a new drug. Mice are very popular because they reproduce and mature into adults quickly. This allows researchers to observe the responses of their offspring, and compare the health of subsequent generations, in a brief period of time. Rodents are utilized so much that the phrase *lab rat* was born. Other animals, such as dogs, cats, monkeys and other primates, and sometimes pigs (whose heart and circulatory system are remarkably similar to that of humans), are also used in experiments.

Once the animal's tolerance for a drug is reached and its responses recorded, the researchers believe that they have learned something about the alleged safe upper limit for human beings. Assuming that the drug is now considered safe enough to be used on human beings, the animals might be killed. Then researchers can legally experiment on humans. These experiments are called *clinical trials*.

Experimenting on animals for the benefit of peoples' health raises difficult ethical issues. Many discoveries have been made because of an animal's sacrifice. Yet at what point does the animal's suffering outweigh the dubious possibility of a beneficial discovery? I bring this up because the moral issue of causing pain to a sentient creature overlaps with whether or not it is scientifically sound to experiment on animals in the first place. How accurate is it to take information learned about animals and apply it to humans?

The organ structure, gland function, biochemistry, and even psychological responses in animals (and of course size) can be very different from those in humans. Therefore, as some researchers already know, the value of data gleaned from animals' responses to drugs is questionable.

When Clinical Trials Damage Even Healthy Volunteers

The trial of a new drug in a London hospital that nearly killed six men three months ago . . . left them in intensive care for weeks. . . . All six trial subjects were moaning or screaming and begging for pain pills. . . . All required weeks of intensive care, suffering failure of their kidneys, lungs and circulatory systems.

The six men, who were all young and healthy just months ago, now suffer from serious medical problems, . . . [including] severely damaged immune systems that will probably leave them vulnerable to disease for life. . . . They have been unable to get any of the drug companies involved in the trial to cover their medical expenses, or provide compensation—other than a one-time payment of under \$20,000 apiece.

The six research subjects were given infusions of the new and unknown drugs only 10 minutes apart. Virtually all reviews of the trial have concluded that such new drugs should be given to one patient at a time, with long intervals in between, so that monitors can screen for serious side effects. . . . TeGenero, the small German bio-technology firm that developed the drug . . . filed for bankruptcy-court protection on July 4.

—Elisabeth Rosenthal

“Inquiries in Britain Uncover Loopholes in Drug Trials”
The New York Times, August 3, 2006

A Human is Not a Test Tube

Sometimes the researchers report that a drug accomplishes the desired effects *in vitro*, which is in a test tube or Petri dish. They cultivate microbial colonies in a nutrient broth to feed them—much as soil nurtures a plant—and then let the microbes interact with the drug while they watch the activity under a microscope. The drug might perform very well to kill the pathogens being studied.

The problem is, *in vitro* is very different from *in vivo*, which is inside a living body (human or animal). The body of a complex and changeable human, or even an animal, provides vastly different nutrients for a dangerous microbe than does a carefully cultivated, selected nutrient medium inside of a container. Nevertheless, even if the two produce different results—that is, the drug in a Petri dish works well but it doesn’t work as desired in a living body—the medication may still be allowed on the market.

How is the Drug Administered?

During clinical trials, a drug intended for oral consumption might be given orally. Similarly, a drug intended for injection might be given via a needle intravenously or intramuscularly. But sometimes during testing, an oral drug is administered by injection. This is often done when researchers experiment on animals. Injection always puts higher concentrations of a substance into the body than oral dosing. Perhaps, then, the intention is to pump as much of the drug as possible into the animal—far more than could be forcibly fed even in a lifetime—to test the subject’s upper limits.

The problem is, a substance that bypasses the digestive process and goes directly into the bloodstream can have completely different effects. Nevertheless, some researchers believe that injecting a drug that’s supposed to be taken orally provides useful and accurate data for a clinical trial.

How Much of the Drug is Administered?

During drug testing, the amounts typically administered are greater than the amounts intended to be prescribed in a real life situation. This is because researchers are trying to discover the subjects’ highest tolerance of a drug before adverse effects occur.

To What is the Drug Compared?

During clinical trials, the drug being tested is often compared to something that the company knows is inferior or unsuitable. The medication might be compared to another drug that doesn’t work well, or to a placebo (more on that shortly). This is done to amplify the illusion that the drug is effective.

How Many Subjects are Tested?

There are three, and sometimes four, phases of a clinical drug trial. In any of the phases the drug can be administered (in two different strengths) against another already accepted therapy or against a placebo. (A placebo is a supposedly inert substance assumed not to have an effect. This will be discussed in more detail shortly.) The FDA website summarizes these phases:

- ◆ *Phase I Trials.* Researchers test a new drug or treatment in a small group of people (20 to 80) for the first time to evaluate its safety, determine a safe dosage range, and identify side [toxic] effects.

those high levels of corticoid hormones [that arise in response to stress]. . . . In that sense, the double-blind research design is unhealthy.⁵⁸

Put another way, double-blind studies actively suppress the immune function of the subjects. Thus, researchers who believe that they are gathering objective data are unknowingly contaminating the test results by preventing subjects from participating in their own healing. It should be obvious that actively interfering with someone's healing process is both unscientific and unethical.

We are commonly taught that the scientific method is linear: Cause 1 + Cause 2 = Effect. In reality, the scientific method is like a circle, where many elements interact with other elements. You can pick one point on the circle, and as you travel around the circumference you are led to every other point. Whole, living systems, such as human beings, are not linear. Very rarely, if ever, does a clear-cut case of "cause and effect" occur, because each body part and system is related to other body parts and systems. This interdependence of all parts in a living system is not linear.

Unfortunately, this truth does not dissuade many researchers from engaging in linear thinking to the exclusion of all else. Ironically, they do not realize that linear thinking prevents them from being scientific!

Clinical Drug Trials Are Not Registered with the Government

After the year 2000, a US federal law was enacted that required drug companies to post all research pertaining to the safety and efficacy of drugs on a government database. However, compliance has been only partial. For example, in July 2004, ABC News reported the FDA's discovery that "less than half of the total number of cancer drug therapy studies in 2002 were listed." The percentage of disclosure for *all* clinical trials was even lower. "Of more than 5,500 currently ongoing drug studies, only 13% were listed on the governmental database. The database wasn't intended to be comprehensive." Why not? What about the law? The report's conclusion: "It's unclear how to make firms comply because federal law prescribes no penalties for a company's failure to post results."⁵⁹

No Clinical Trials, but a Drug is Marketed Anyway

The FDA is known for approving drugs that haven't been properly tested over a long enough period, or with enough test subjects. An illuminating article, "New Drugs Hit the Market, but Promised Trials Go Undone," appeared in the March 4, 2006 edition of *The New York Times*.

When it approves new drugs for sale, the Food and Drug Administration often requires their manufacturers to study whether they are working as intended and whether they have unwanted side effects. But the agency reported . . . that two-thirds of the studies had not even been started.

. . . [The] director of the Office of New Drugs at the agency . . . emphasized that only 5% of the promised drug trials were officially considered "delayed." In many cases, trials have been pending for more than a decade but are not considered delayed because the agency never insisted on a specific timeline for the tests. . . . The agency often compromises by approving a drug quickly and then insisting that its maker prove after approval that the drug actually works. This strategy . . . has been only marginally successful.

As of September 30, of the 1,231 promised drug trials, 797, or 65%, had not begun or were "pending," according to the FDA. Another 231 were considered "ongoing" and 28 were "delayed." In the 2005 fiscal year, drug makers completed and submitted the results of 172 trials, the agency reported.⁶⁰

Note that the FDA has clout if it chooses to use it. The author stated that if pharmaceutical companies tend to be a little "delayed" in submitting test results to the FDA after their products are already on the market, they do "complete trials rapidly when the FDA demands the results as a condition for approval."⁶¹

Even more problems exist with drug trials. Many people with cancer are afraid to receive a placebo they don't believe will be as effective as the actual drug, so not enough cancer subjects enroll in clinical trials. Due to this shortage of test subjects, few cancer drugs are even assessed. (Ironically, new cancer drugs that are thought to produce similar effects to already existing drugs still tend to be tested.) Also, drug trials are expensive. Pharmaceutical manufacturers may be reluctant to invest more money in

- ◆ Almost 70% of Americans take at least one prescription drug.
- ◆ More than 50% of Americans take two prescription drugs.
- ◆ A full 20% take five or more prescriptions.
- ◆ Antibiotics, antidepressants and painkilling opioids are the most commonly prescribed drugs.

—Mayo Clinic News Network, June 19, 2013
from a study funded by the National Institute on Aging
and the Mayo Clinic Center for the
Science of Health Care Delivery

The True Cost of Your Prescription Drugs

Did you ever wonder how much it costs a drug company for the active ingredient in prescription medications? . . . We did a search of offshore chemical synthesizers that supply the active ingredients found in drugs approved by the FDA . . . A significant percentage of drugs sold in the United States contain active ingredients made in other countries [and which may be contaminated with heavy metals and other impurities]. In our independent investigation . . . we obtained the actual price of active ingredients used in some of the most popular drugs sold in America.

So often, we blame the drug companies for the high cost of drugs, and usually rightfully so. But in this case, the fault clearly lies with the pharmacies themselves. For example, if you . . . bought the name brand, you might pay \$100 for 100 pills. The pharmacist might tell you that if you get the generic equivalent, they would only cost \$80, making you think you are “saving” \$20. What the pharmacist is not telling you is that those 100 generic pills may have only cost him \$10! . . . This helps to solve the mystery as to why they can afford to put a Walgreen’s [a combination pharmacy and convenience store] on every corner. The chart below speaks for itself.

Drug and mg dose	Retail (100 tablets)	Cost, active ingredients	Markup (%)
Celebrex®, 100 mg	\$ 130.27	\$ 0.60	21,712 %
Claritin®, 10 mg	\$ 215.17	\$ 0.71	30,306 %
Keflex®, 250 mg	\$ 157.39	\$ 1.88	8,372 %
Lipitor®, 20 mg	\$ 272.37	\$ 5.80	4,696 %
Norvasc®, 10 mg	\$ 188.29	\$ 0.14	134,493 %
Paxil®, 20 mg	\$ 220.27	\$ 7.60	2,898 %
Prevacid®, 30 mg	\$ 44.77	\$ 1.01	34,136 %
Prilosec®, 20 mg	\$ 360.97	\$ 0.52	69,417 %
Prozac®, 20 mg	\$ 247.47	\$ 0.11	224,973 %
Tenormin®, 50 mg	\$ 104.47	\$ 0.13	80,362 %
Vasotec®, 10 mg	\$ 102.37	\$ 0.20	51,185 %
Xanax®, 1 mg	\$ 136.79	\$ 0.024	569,958 %
Zestril®, 20 mg	\$ 89.89	\$ 3.20	2,809 %
Zithromax®, 600 mg	\$ 1,482.19	\$ 18.78	7,892 %
Zocor®, 40 mg	\$ 350.27	\$ 8.63	4,059 %
Zoloft®, 50 mg	\$ 206.87	\$ 1.75	11,821 %

—Sharon L. Davis, Budget Analyst, US Department of Commerce and
Mary Palmer, Budget Analyst, Bureau of Economic Analysis, Office of Budget & Finance
www.budget.gpo.gov/pressroom/2004/08/14/081404a.htm (August 14, 2004)



The True Cost of Your Hospital Stay

In America today, hospitals and doctors are blatantly ripping us off and they aren’t making any apologies for it. . . . Some hospitals mark up treatments by *1,000 percent*. . . . Basic medical supplies are being billed out at hundreds of times what they cost providers. For example, it has been reported that some hospitals are charging up to 30 dollars for a single aspirin pill. . . . These medical predators get their hands on us when we are at our most vulnerable. . . . In our lowest moments we are willing to pay just about anything to get better or to make the pain go away. And so they very quietly have us sign a bunch of forms without ever telling us how much everything is going to cost. Eventually when the bills come in the mail, it is too late to do anything about it. . . . US hospital charges continue to soar . . . *charging more than ten times the total cost—or almost \$1,200 per \$100 of the cost of care*. Meanwhile, the hundred priciest hospitals in the nation were found to have this cost ratio begin at *765 percent*, which is more than twice the national average of *331 percent*.

—Michael Snyder “Hospitals Are Blatantly Ripping Us Off,” June 9, 2015
theeconomiccollapseblog.com/archives/hospitals-are-blatantly-ripping-us-off

THE PHARMACEUTICAL INDUSTRY'S ALLIANCE WITH OTHER GOVERNMENT AGENCIES AND OFFICIALS

The Food and Drug Administration is not the only government agency with fingers in the pharmaceutical money pot. The drug industry has contributed astronomically high sums to political candidates and officials already in office. Twelve years ago, the Center for Public Integrity—a nonprofit organization focusing on politics, immigration, worker rights and “national security”—had a different focus. It was investigating drug companies so it could educate people “with tools and skills they need to hold governments and other institutions accountable.”⁷⁰ Even though the data below is over ten years old, it’s worth reviewing because the strategies of the drug industry have not changed. (One has to wonder why the medical data is no longer on the CPI website.)

In the area of lobbying alone, the CPI reported that the pharmaceutical industry:

- ◆ Employed [between October 1998 and April 2005] . . . almost 3,000 professional lobbyists, more than “any other organized interest,” including insurance companies.⁷¹
- ◆ Engaged 1,291 lobbyists in 2004, “some 52% [of whom] were former federal officials.”⁷² “This included more than 50 former members from the House [of Representatives] and a dozen from the Senate.”⁷³
- ◆ Lobbied “on more than 1,400 congressional bills since 1998 and spent a whopping \$612 million during that period.”⁷⁴
- ◆ Spent nearly \$116 million lobbying the government in 2003, and \$123 million in 2004.⁷⁵
- ◆ Utilized, since 1998, “four and a half pharmaceutical industry lobbyists . . . for every member of Congress in office.”⁷⁶

The slang phrase *Big Pharma* has captivated the attention of drug industry critics and even been used in the mainstream press. This phrase is probably derived from the name of the trade association Pharmaceutical Research and Manufacturers of America, whose acronym is PhRMA. PhRMA, the tenth largest lobbying organization in the US, represents more than forty of the world’s best-known drug companies. The CPI reported that “besides its 38 in-house lobbyists, PhRMA employed 160 lobbyists . . . [from] 2003 to 2004. Since 1998, the organization used 64 different firms to lobby 35 federal agencies on 38 issues.” In addition, PhRMA spent more

than \$65 million on lobbying from October 1998 through April 2005.⁷⁷

Gifts to politicians have played a huge role in the pharmaceutical industry’s romance with government. A study of more than 25,000 public documents, conducted by CPI, revealed that members of Congress, their staff, and aides received almost \$50 million worth of 23,000 privately funded trips, and “repeatedly ignored travel disclosure requirements and House and Senate rules.”⁷⁸

FDA personnel were also courted. Although policy forbids employees from taking trips paid for by health-related companies, significant amounts were spent on gifts to FDA employees. The FDA used an “apparent loophole” in the law, stated the CPI, to accept over “\$1.3 million in sponsored travel since 1999 from groups closely tied to pharmaceutical and medical device companies.” This money was used to “fly and host agency employees. Eleven drug safety board members were among the travelers sponsored. . . . Nonprofit groups and universities with . . . ties [to Big Pharma] paid for roughly a third of the more than 3,600 trips taken by [FDA] officials.”⁷⁹

It’s common knowledge that Big Pharma regularly contributes large sums to political groups and candidates sympathetic to its advancement. Data analyzed by CPI showed that executives, employees and political action committees of drug companies:

donated more than a combined \$18 million to state political groups and candidates from 2001 to 2004. . . . Pharmaceutical companies also spent significant amounts themselves on campaign donations to state candidates [with] favored positions on issues important to the industry. Pfizer contributed more than \$3 million to candidates for state office over the period; Eli Lilly and GlaxoSmithKline each gave more than \$2.2 million.⁸⁰

Not all of the money the drug industry spends is reported to the Internal Revenue Service (IRS). In 2002, PhRMA gave \$41 million in political contributions to pro-drug industry candidates. According to a report issued by another monitoring group, Public Citizen, PhRMA failed to mention most of these contributions to the IRS. These contributions were funneled through organizations claiming to be advocacy groups for senior citizens, which exempted PhRMA from having to disclose funding sources. Not surprisingly, instead of being used to make the lives of elders easier, the money paid for ads that supported political candidates who were friendly to the interests of Big Pharma/PhRMA.⁸¹

- ◆ In June 2004, 13-year-old Alex Kim from Suwanee, Georgia, hanged himself shortly after his Lexapro[®] prescription was doubled.
- ◆ In March 2005, in Red Lake, Minnesota, 16-year-old Jeff Weise killed his grandfather and his grandfather's companion, and later, at the high school on Red Lake Indian Reservation, shot at fellow students and some adults, several of whom died. Jeff then killed himself. The boy had been prescribed 60 mg/day of Prozac[®]—three times the average starting dose for adults!
- ◆ In October 2007, at SuccessTech alternative high school in Cleveland, Ohio, 14-year-old Asa Coon shot and wounded four people before taking his own life. Court records revealed that Coon was taking Trazodone[®].
- ◆ In September 2008, in western Finland, Matti Saari, a 22-year-old student, shot and killed ten people, and wounded another, before killing himself. The Finnish Ministry's report stated that Saari was taking an SSRI drug as well as a benzodiazapine tranquilizer (a category that includes Valium[®] and Xanax[®]).
- ◆ In 2010, in Huntsville, Alabama, 15-year-old Hammad Memon shot and killed a fellow school student. He had been diagnosed with ADHD and depression, and was taking Zoloft[®] and other drugs.
- ◆ In October 2013, in Sparks, Nevada, 12-year-old Jose Reyes opened fire at Sparks Middle School, killing a teacher and wounding two students before committing suicide. He was taking fluoxetine (a generic version of Prozac[®]), prescribed by a psychiatrist, at the time.
- ◆ In April 2014, in Milford, Connecticut, 16-year-old Chris Plaskon stabbed a friend to death at Jonathan Law High School after she declined his invitation to the prom. At the trial, Chris's attorney stated that his client had been diagnosed with ADHD and was taking prescribed medications for psychosis and anxiety. The boy said that demons had told him to kill the girl.

Not all drug-related murders, attempted murders, and suicides have been committed by children or teenagers. Young adults in their 20s, and older adults with children, have also been affected by these drugs. For example:

- ◆ In January 1999, in Grand Forks, North Dakota, Ron Ehlis killed his 5-week-old daughter ten days after he started taking Adderall[®]. As a child, Ron had been diagnosed with ADD and was prescribed Ritalin[®]. When he was 26 years old, a psychiatrist he consulted (because he was having a hard time with his college studies) prescribed Adderall[®], but did not perform any tests first. Following the doctor's instructions, Ehlis doubled the dose after a few days, after which he began suffering from hallucinations and delusions. He shot his baby girl, believing that he was following orders from God. Then he shot himself in the stomach. Ron was charged with murder, but the charges were later dismissed after several doctors testified that he was suffering from a psychotic disorder induced by amphetamines. The mother of the child he had killed testified that Ron had not been behaving normally from the moment he started taking the Adderall[®].
- ◆ In September 1999, in Spokane, Washington, Sharon Curry stabbed and killed her 8-year-old daughter before stabbing herself. On Adderall[®] at the time, Curry was found not guilty of all charges. Doctors for both the defense and the state agreed that Sharon suffered from a drug-induced insanity that caused such an aberrant mental state, she was unable to distinguish between right and wrong. Sharon sued her doctor for prescribing an excessive dose of Adderall[®], which had caused her to kill her daughter. The lawsuit was settled out of court, its details withheld from the public.

Breathing is a pulsation in which expansion and contraction of the body alternate. The simplest way to block the expansive or contractive movement of the body in emotional expression is to suspend the main pulsation in the organism: to hold the breath. Note that this is a conscious process. The jaw clamps shut, or the muscles of chest and abdomen spontaneously tighten as anxiety is felt.

The word *anxiety*, from the Latin word for "narrow," expresses this experience of tightness of the muscles of jaw, throat, chest, and abdomen. The channel of breathing is narrowed. Anxiety in its most intense form is fear—a total contraction of the organism. But normally anxiety is a partial contraction against an impending movement of emotion.

When the expansive emotions of joy or rage are blocked, either chronically or in a temporary emergency, the breathing tends to block in a deflated position, with the body area contracted. A depressed person, whose organism resists either joy or rage, tends to be stuck in an attitude of deflation. The body is slumped, hunched, folded forward. The attitude seems to say "I've given up."

When the contractive emotions of grief or fear are blocked, the breathing tends to be held in an inflated position, the chest puffed out. The attitude may seem defiant: "I won't give in."

—Sean Haldane
Emotional First Aid, 1984

- ◆ In March 2000, in Scottsdale, Arizona, Dawn Branson was driving with her son in the car when she suffered a psychotic episode. Court documents stated that Dawn heard a voice saying: “Let go of the steering wheel and gas. God will drive the car. Don’t you trust him?”¹²¹ So Branson released the wheel, resulting in a car accident that caused her serious injuries and killed her son. Dawn Branson was taking (prescribed) Adderall[®] at the time. Prior to taking the drug, she’d never had a psychotic episode. After she stopped taking the drug, her psychotic episodes ceased.
- ◆ In February 2008, in a Northern Illinois University auditorium in DeKalb, Illinois, 27-year-old Steven Kazmierczak shot and killed five people, wounded 21 others, and then killed himself. According to his girlfriend, he had recently been taking Prozac[®], Xanax[®] and Ambien[®]. Post-mortem toxicology results revealed trace amounts of Xanax[®] in his system.
- ◆ In June 2014, in Seattle, Washington, 26-year-old Aaron Ybarra opened fire at Seattle Pacific University, killing one student and wounding two others. He had reported, in 2012, that his psychiatrist had prescribed Prozac[®] and Risperdal[®].
- ◆ In November 2014, in Tallahassee, Florida, 31-year-old Myron May opened fire in the library of Florida State University. He wounded three people before he was shot and killed by police. After the incident, May’s friends stated that he had been prescribed Wellbutrin[®] and Vyvanse[®]. Around the same time, they had found Seroquel[®] among his prescriptions as well. ABC Action News also reported a prescription for Hydroxyzine[®] (an anti-anxiety drug) in his apartment. Two months before the murders, May had been admitted to a local mental health center, Mesilla Valley Hospital.

So far, all of the murders summarized here happened on the ground. A later event—which to many, felt even more shocking because of the venue and the number of people killed—occurred in a plane en route from Spain to Germany in March 2015. The co-pilot, 27-year-old Andreas Lubitz, deliberately crashed the plane once it was in mid-air. Everyone on board (150 people), including Lubitz, was killed. Diagnosed with depression, anxiety and panic attacks, Lubitz had been taking Lorazepam[®] and other medications. With rare exceptions, the US Federal Aviation Administration does not allow pilots to use mind-altering drugs (such as Lorazepam[®]) that interfere with the ability to operate vehicles on the road or in the air.

The Pharmacology of Psychotropic Drugs and the Battle for Disclosure

A Brief Summary of the Brain

It can be very difficult to believe that people taking prescription psychotropic drugs can become so deranged, so different from how they would normally behave, that they would kill other people. The apparent formula of cause and effect does seem simplistic: child takes drug and murders, or child takes drug and commits suicide, or both. How could mind-altering drugs “alter the mind” so much that they turn someone into a criminal?

The Insert on page 56, “Effects of Some Popular Psychotropic Drugs,” summarizes the effects on mind and body from different types of mind-altering drugs. But in order to understand *why* they exert these effects, we need to learn first how brain chemicals work. Just a brief summary will suffice.

The body contains four classes of chemical messengers called *neurotransmitters*. *Neuro* designates “neuron,” which is a nerve cell. And *transmitter* means just that: the transportation, or transmission, of a biochemical from cell to cell. Neurotransmitters dictate how we conduct ourselves in the world and they cover an enormous range of functions: mood, mental acuity, perception, sensation, temperature control, motor coordination, digestion, sleep, blood pressure, aggression levels, and more. The Insert on page 65, “Functions and Effects of Neurotransmitters,” summarizes the four basic neurotransmitters (or neurotransmitter groups) and their impact on us if their levels are adequate or unbalanced on the low side.

Neurotransmitters at higher than average levels are not discussed, but you can get a sense of what those effects might be by exaggerating the benefits. For instance, dopamine and other catecholamines are *endogenous*—that is, naturally produced by the body—amphetamines. If, at normal levels, the catecholamine group promotes energy and focus, excessively high levels could induce someone to be excessively energized and hyper-focused or obsessive, resulting in compulsive, risk-taking behaviors.

Our neurochemicals are interconnected with the world around us. Just as our neurochemical levels affect how we feel, perceive and respond to our environment, the environment affects our neurotransmitter levels. There will always be fluctuations in neurotransmitter levels, depending on diet, amounts of exercise and sleep, relationship satisfaction, work stressors, and so on; after all, humans aren’t static machines. Sometimes, though, the amounts of neurochemicals being secreted are adequate but the timing is off. For example, there might be a shortage of catecholamines in the morning, which is

We have seen that there are ways to balance the brain that don't involve pharmaceuticals. Using natural methods requires guidance from a skilled and experienced practitioner, but it can be done. Properly administered natural methods don't harm others. And they don't injure the people who are using them. Isn't it worth a try?

The arguments that favor psychotropic drugs always seem to omit several considerations. One, what are the causes of the conditions diagnosed as depression, ADD, ADHD, manic-depression (bipolar disorder), and other forms of mental and emotional suffering? Two, what do we need to address the *root causes* of these presumed disorders, rather than simply mask symptoms with medications? Three, what are psychotropic drug users missing by not trying other modalities? And four, at what price are some people obtaining relief? Will a psychotropic drug user have a full life? Is the "relief" worth the "side" effects of physical and mental malfunction? Is the "relief" worth the chance of becoming so "altered" that s/he commits brutal crimes—or beomes a victim of one?

It's clear that severe depression, extreme lack of focus, and other undesirable psychological conditions correlate to chemical imbalances. But *correlation does not mean "cause."* Just as brain chemistry imbalances can produce emotional, mental and behavioral dysfunction, external conditions can affect brain chemistry. Some conditions not mentioned earlier include chemical contaminants (such as heavy metals and pesticides), malfunctions in absorption and utilization pathways, thyroid imbalances (which profoundly influence mood and affect a surprisingly high percentage of the population), and pathogens such as certain strains of *Streptococcus*. Even the overuse of television and video games alters the neurological pathways in the brain, as I'll discuss later in this chapter. Is there any surprise, then, that children are exhibiting aberrant behaviors and bizarre symptoms on such a grand scale? Unless the root causes of emotional upset and perceived misbehavior are addressed, relying on a foreign chemical to balance brain chemistry doesn't make sense. As holistic practitioners like to say, no one has ever had a Prozac[®] deficiency. It's imperative to address the diagnoses themselves.

I have devoted considerable space to the drugging of (mostly underage) children because, in a bizarre example of life reflecting art, we appear to be in the process of creating a nation of zombies. Gary Null et al. write:

Patients have the freedom . . . to refuse medical treatment even if it is recommended by their physician, and to be informed about their medical condition, the risks and benefits of treatment, and appropriate alternatives.

—Association of
American Physicians and Surgeons,
October 2000
aapsonline.org/testimony/vacresol.htm

A whole generation of antidepressant users has resulted from young people growing up on Ritalin[®]. Medicating youth and modifying their emotions must have some impact on how they learn to deal with their feelings. They learn to equate [the skill of] coping with drugs, and not their inner resources. . . . [Even the *Journal of the American Medical Association* admits] Ritalin[®] acts much like cocaine."¹⁵²

We must ask: Do we want to experience our feelings, which is what makes us human—or numb ourselves from our experiences, emotions and sensations? Do we want to be empowered to deal with life—or deaden ourselves while we're still living? If we choose numbness, are we prepared for the possibility of becoming a suicide or murder statistic?

Assuming a more optimistic scenario—that more detailed warnings are put on drug labels, and that these warnings are accessible to consumers—class action lawsuits by parents and doctors may be too little, too late. We must prepare for the possibility that new laws can be created absolving drugs companies of liability, even if it can be proven that the companies knew about the dangers before the drugs were marketed. It's up to parents to educate themselves if they want to protect their children. The subordinate legal status of children (not to mention their still-growing brains and nervous systems) makes them vulnerable to being poisoned in the name of "illness prevention."

Anyone—whether it's a government, legal agency, doctor, teacher, priest, or parent—who uses a position of authority to force you to ingest a medication with questionable benefits and severe "side" effects, is either woefully ignorant or doesn't care about your welfare. And any law that forces someone to take medication, that limits access to information, or prevents people from seeking recourse if they are harmed, does not care that people are becoming mindless, ignorant, powerless, and sick. As long as people remain blindly obedient to the allopathic paradigm of "It's broken, so let Big Pharma fix it," those at the highest ranks of power will exert even tighter control over the general population. If we allow these attempts at control to continue, we'll have no one but ourselves to blame. And our children will be the ones who suffer the most, disregarded as "collateral damage."

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“biological substances composed of animal cells”—is that “they enter directly into the bloodstream,” which allows them to “become part of our [own] genetic material.”¹⁹⁰ These proteins, which are the genetic material of cells from other species, can also be implanted into human tissue by any viruses that are in the vaccines. Remember, viruses enter any cells easily and appropriate the host’s DNA. This is why they’re often used by researchers to deliberately escort other (foreign) materials into the cells.

Many vaccine ingredients are obtained in a horribly cruel manner. Sentient, healthy dogs and monkeys are deliberately infected. Then workers collect the products of disease from these suffering animals.

Dirty byproducts are invited into the body every winter that people line up for flu shots, every time parents accept vaccines as a condition for their children being able to attend school, every time a doctor—in the name of “healing”—jabs an infant. On so many levels, there is no justification for putting medical waste into the body.

Heavy Metals

Mercury. Vaccines contain *thimerosal*, a compound that’s about 50% mercury by weight. Used in vaccines as a preservative due to its antifungal properties, thimerosal, says the FDA, has a “long record” in “preventing bacterial and fungal contamination of vaccines.”¹⁹¹ Fungi tend to grow in vaccines containing many different types of bacteria, compared to single-pathogen vaccines that do not promote fungus growth as readily. Because multiple-purpose vaccines are cheaper to produce than single-purpose vaccines, thimerosal is widely used.

Toxicologists rightly regard mercury—widely known as a *neurotoxin* (nerve poison)—as one of the most lethal substances on Earth. The website of the United States Environmental Protection Agency bluntly states: “All forms of mercury are quite toxic, and each form exhibits different health effects.”¹⁹² Gary Null, PhD and Martin Feldman, MD, summarize research studies gleaned from respected medical journals:

Promotion of the Gardasil® Vaccine: A War on Girls—and Now Boys, Too

The Gardasil® vaccine, distributed by Merck & Co., is supposed to produce immunity to the human papilloma virus (HPV), which is implicated in genital warts and cervical cancer. (Cervarix® from GlaxoSmithKline is another brand name for a similar formula.) First marketed to girls as young as age 9, to be taken in three doses over a six month period, the vaccine is now marketed to boys age 12 and over, for mouth and throat cancers supposedly acquired during oral sex. The FDA approved the vaccine in 2006, and the CDC encourages all boys and girls to take it.

No data exists showing that these vaccines prevent cervical cancer. The two testing periods—5 and 8.4 years—were too brief because cervical cancer can take 40 years to manifest from the onset of an HPV infection. Just several of the vaccine’s adverse effects include autoimmune conditions; early menopause; chronic fatigue; brain damage, convulsions, seizures and paralysis; deafness; blindness; lethal inflammatory cardiovascular disorders; cervical cancer itself; and death.

Fifteen-year-old honor student Gabi Swank was one inoculation casualty. She said she felt pressured into being vaccinated by incessant TV advertisements. Not warned of any undesirable effects, she suffered two strokes, resulting in partial paralysis and vision loss, and now often must use a wheelchair. Thirteen-year-old Jenny Tetlock, 15 months after being inoculated, developed a degenerative muscle condition that left her almost totally paralyzed. And a daughter of Dr. Scott Ratner, after her first Gardasil® dose, was affected as well. She became, he stated, a “chronically ill, steroid-dependent patient with autoimmune myofasciitis. I’ve had to ask myself why I let my eldest of three daughters get an unproven vaccine against a few strains of a nonlethal virus that can be dealt with in more effective ways.”¹⁹³ In 2007, 1,700 girls in the US alone reported adverse effects. In 2012, 4,700 adverse effects were reported in the UK. However, of 200 claims filed against the manufacturer in the US, only 49 have been compensated for injury caused by the vaccine. (The 49 claimants received about \$120,000 each.) Even nursing infants have died whose mothers received the vaccine: one of the earliest reports was filed in the Vaccine Adverse Event Reporting System on September 1, 2010.

A 2013 *Annals of Medicine* article reported: “The world’s leading medical authorities state that HPV vaccines are an important cervical cancer prevention tool, [but] clinical trials show no evidence that HPV vaccination can protect against cervical cancer. . . . In the Western world cervical cancer is a rare disease with mortality rates that are several times lower than the rate of reported serious adverse reactions (including deaths) from HPV vaccination.”¹⁹⁴ Even Dr. Diane Harper, a former Merck employee who helped get Gardasil® approved, criticized the vaccine. She says that no data beyond five years has shown the vaccine’s effectiveness, and consumers should be warned of its dangers.

After four girls died in India in 2010, the drug was banned. In Germany, scientists stated that the HPV strains most implicated in cervical cancer were not even in the vaccine, so they couldn’t support it. In 2015, the Japanese government recommended that no one take Gardasil® due to all the negative reactions. In the US, this vaccine is still heavily marketed because of politics, not health. Just one example of many: Texas governor Rick Perry issued an executive order in 2007 that all Texas girls be vaccinated with Gardasil®—after his former chief of staff became a lobbyist for Merck. Merck had given thousands of dollars in political donations to the governor.

Mercury exposure has been associated with nerve cell degeneration, adverse behavioral effects, and impaired brain development. It also has been linked to degenerative chronic conditions such as Alzheimer's disease. The developing fetal nervous system is the most sensitive to its toxic effects, and prenatal exposure to high doses of mercury has been shown to cause mental retardation and cerebral palsy.¹⁹⁵

To give you an idea of how thimerosal is used, the multi-dose flu vaccine contains 51,000 ppb (parts per billion) of mercury. This amount—51,000 ppb—is 25,000 times more than the legal maximum limit for mercury in drinking water, as established by the United States Environmental Protection Agency (EPA). Moreover, mercury that's injected is completely absorbed, one hundred percent. This makes it even more toxic than when it's in a glass of water that you drink, or in the large fatty ocean fish that you eat for your meal.

Despite mercury's deserved reputation as a poison, the mercury compound thimerosal is promoted by the medical establishment, the FDA, and even the EPA as the "helpful" and "safe" form of mercury, compared to other types. There is so much confusion and misinformation surrounding thimerosal that we need to take at least a brief look at the three different forms of mercury and their widely acknowledged effects.

- ◆ *Elemental / Metallic / Inorganic Mercury (Chemical Symbol is Hg)*. Alone, unbound to any other substance, mercury is a thick silvery liquid at room temperature. (Some readers may remember, as children, playing with mercury globules, which are also known as "quicksilver.") Even short-term exposure causes damage to the central nervous system (CNS) in the form of tremors, mood changes, and delayed sensory and motor nerve function. Chronic (long-term) exposure causes additional problems of a psychological nature, such as irritability and excessive shyness.
- ◆ *Inorganic Mercury Compounds*. In the field of chemistry, *inorganic* means "without carbon." Inorganic mercury compounds are formed when mercury combines with any other element—for example, chlorine, sulfur or oxygen—*except* carbon. One common mercury compound is a salt called mercuric chloride. Oral ingestion causes nausea, vomiting, and severe abdominal pain. Chronic exposure causes kidney damage, abnormal development, and tumors, in (among other areas) the stomach, thyroid, and kidneys.

- ◆ *Organic Mercury Compounds*. In the field of chemistry, *organic* means "with carbon." Organic mercury compounds are formed when mercury combines with not only carbon, but some other elements too. Methylmercury is one of the two most common organic mercury compounds. Acute exposure causes developmental abnormalities and CNS damage, including blindness, deafness, and impaired perception. Chronic exposure causes additional CNS damage, including blurred vision, speech difficulties, visual field constriction, lethargy, and paresthesia (a sensation of tingling, pricking, or burning on the skin). Children of women who ingested high levels of mercury compounds while pregnant have a much greater risk of developing cerebral palsy, problems with motor coordination and balance, blindness, and mental retardation.

Whether in its single-element form or combined with another element as a compound, mercury is deadly. But what about thimerosal? As mentioned, highly toxic methylmercury is one of the two most common organic mercury compounds. The other common organic mercury compound is *ethylmercury*. When thimerosal is metabolized by the body, it breaks down into ethylmercury.

Both methylmercury and ethylmercury (thimerosal's byproduct) travel to all body tissues, and can even cross the placental and blood-brain barriers. But the medical establishment claims that ethylmercury is safe because (unlike methylmercury) it's excreted quickly by the body. In fact, the FDA website states, thimerosal "is metabolized or degraded to [presumably harmless] ethylmercury and thiosalicylate. Ethylmercury is an organomercurial that should be distinguished from methylmercury, a related substance that has been the focus of considerable study."¹⁹⁶

However, even the FDA acknowledges that "some infants could have been exposed to cumulative levels of mercury during the first six months of life that exceeded EPA recommended guidelines for safe intake of methylmercury." But, it assures us, this has nothing to do with vaccines, because the "existing guidelines [are] for exposure to *methylmercury*"—and the metabolite of thimerosal is *ethylmercury*, for which "there are no existing guidelines." Furthermore, declares the FDA, "At the time of this review in 1999, the maximum cumulative exposure to mercury from vaccines in the recommended childhood immunization schedule was within acceptable limits for the methylmercury exposure guidelines set by FDA, ATSDR [Agency for Toxic Substances and Disease Registry], and WHO [World Health Organization]."¹⁹⁷

For the moment, let's overlook the FDA's guarantee that it's following the "acceptable limits" for thimerosal as set by three government agencies (and its attempt

to divert us from the issue by saying that “there are no existing guidelines” for ethylmercury). Is there indeed, as the FDA claims, a substantial difference between methylmercury (acknowledged to be toxic), and its metabolite, ethylmercury (which is considered safe, whose precursor is used in vaccines)?

A July 2015 Internet search, using the phrase “methylmercury vs. ethylmercury,” located an article in the August 2013 issue of the *Journal of Applied Toxicology*, called “Toxicity of ethylmercury (and Thimerosal): a comparison with methylmercury.” The authors review numerous *in vivo* and *in vitro* studies that show damage to cardiovascular, neural, and immune cells. Because ethylmercury has a shorter half-life than methylmercury, the authors assume that it possesses “different”—in other words, less harmful—“exposure and toxicity risks.” “In real-life scenarios,” they comment, “a simultaneous exposure to both [ethylmercury] and [methylmercury] might result in enhanced neurotoxic effects in developing mammals,” adding that “our knowledge on this subject is still incomplete, and studies are required to address the predictability of the additive or synergic toxicological effects of” both forms of mercury.¹⁹⁸ Intentional or not, this conclusion is misleading. Ethylmercury is dangerous in its own right, separate from any simultaneous exposures to methylmercury.

Many studies exist that clearly show the harm of ethylmercury and its precursor thimerosal. Here is a very small sample of studies, from the earliest to most recent. Note that the May 2010 article draws on research conducted in the 1930s and 1940s. Even then, scientists knew that thimerosal was toxic!

- ◆ October 2001: “Predicted mercury concentrations in hair from infant immunizations: cause for concern.” The abstract states: “As part of an ongoing review, the Food and Drug Administration (FDA) announced in 1999 that infants who received multiple TMS-preserved vaccines may have been exposed to cumulative Hg in excess of Federal safety guidelines. . . . Neurobehavioral alterations, especially to the more susceptible fetus and infant, are known to occur after relatively low dose exposures to organic mercury compounds. . . . Given that exposure to low levels of mercury during critical stages of development has been associated with neurological disorders in children,

including ADD, learning difficulties, and speech delays, the predicted hair Hg concentration resulting from childhood immunizations is cause for concern. Based on these findings, the impact which vaccinal mercury has had on the health of American children warrants further investigation.”¹⁹⁹

- ◆ June 2005: “Mitochondrial mediated thimerosal-induced apoptosis [cell death] in a human neuroblastoma cell line (SK-N-SH).” The abstract states: “Environmental exposure to mercurials continues to be a public health issue due to their deleterious effects on immune, renal and neurological function.

Recently the safety of thimerosal, an ethyl mercury-containing preservative used in vaccines, has been questioned due to exposure of infants during immunization. Mercurials have been reported to cause apoptosis [cell death] in cultured neurons; however, the signaling pathways resulting in cell death have not been well characterized. Therefore, the

If you inject thimerosal into an animal, its brain will sicken. If you apply it to living tissue, the cells die. If you put it in a Petri dish, the culture dies. Knowing these things, it would be shocking if one could inject it into an infant without causing damage.

—Robert F. Kennedy Jr.
“Deadly Immunity: Exposing the
Vaccine-Autism Link,” 2005

objective of this study was to identify the mode of cell death in an *in vitro* model of thimerosal-induced neurotoxicity . . . Within 2 h[ours] of thimerosal exposure (5 microM) to the human neuroblastoma cell line, . . . morphological changes, including membrane alterations and cell shrinkage, were observed. Cell viability . . . showed a time- and concentration-dependent decrease in cell survival upon thimerosal exposure. . . . These findings suggest deleterious effects . . . by thimerosal.”²⁰⁰

- ◆ May 2010: “The relative toxicity of compounds used as preservatives in vaccines and biologics.” The authors write: “The present study was specifically designed to evaluate the relative toxicities of compounds commonly used as preservatives in US licensed vaccines, to human neurons and bacterial cells. Overall, none of the compounds commonly used as preservatives can be considered ideal preservatives. They were all found to be significantly toxic to human neurons, and worse they were all found to be significantly more toxic to human neurons than [to] bacterial cells. . . . it is doubtful that any of the compounds commonly used as preservatives . . . would comply with the CFR requirements for preservatives. . . . future formulations of vaccines/biologics should be produced in aseptic manufacturing plants as single dose preparations, eliminating the need for preservatives and minimizing the risk to patients.”²⁰¹

Dangerous Chemicals

There are many chemicals in vaccines besides the heavy metals. Chemicals are so abundant in these formulas, that their levels are greater than that of the pathogens.

- ◆ *Formaldehyde (also known as formalin)*. This preservative is used to embalm corpses. The National Institute of Occupational Safety and Health (NIOSH) states that formaldehyde is “immediately dangerous to life or health” at 10 ppm (parts per million).²¹⁷ For the air inside new buildings that off-gas, the United States Environmental Protection Agency (EPA) sets an even lower limit of 0.016 ppm of formaldehyde. In contrast, flu vaccines range from 25 to 100 mcg (micrograms) per dose—comparable to 50 to 200 ppm per dose. The Material Safety Data Sheet for formaldehyde notes that it’s carcinogenic, mutagenic (able to cause genetic mutations), and possibly teratogenic (interfering with the growth and development of an embryo or fetus).
- ◆ *Gelatin*. Gelatin is a collagen-rich protein obtained by boiling bones, skin, tendons and/or ligaments, usually from cows or pigs. When eaten, gelatin is normally a healthful food (and truthfully marketed as able to help strengthen nails and hair). However, people may develop an allergy to gelatin if it’s injected with a vaccine formula instead of eaten as part of a meal. In the digestive tract, gelatin is processed correctly by the body. When injected, gelatin understandably causes the body to perceive it as a foreign invader to be eliminated. The growing epidemic of food allergies and asthma in children is partly due to the gelatin in vaccines.
- ◆ *Monosodium Glutamate (MSG)*. Commonly known as a flavor enhancer, MSG is actually a poison that in some ways mimics the effects of toxic (heavy) metals. MSG can cause abnormal blood pressure, muscle and joint pain, skin rashes, and gastrointestinal and respiratory difficulties. A neurotoxin, monosodium glutamate also damages the brain and nervous system—which is why it causes so many neurological symptoms including dizziness, migraines, insomnia, hyperactivity, mental confusion, anxiety, and depression. MSG poisoning is sometimes misdiagnosed as neurological disorders, ranging from Alzheimer’s to Amyotrophic Lateral Sclerosis (ALS, also called Lou Gehrig’s disease).
- ◆ *Phenoxyethanol*. A potent bactericide and yeast killer, this alcohol-related preservative (part of the glycol ether group) is used in perfumes, insect repellents, dyes and inks, and pharmaceuticals. The EPA’s Material Safety Data Sheets on other glycol ethers indicate that they cause genetic and chromosomal mutations, and interfere with reproduction (inducing

testicular atrophy). The FDA warns that this chemical is toxic to infants via ingestion, and “can depress the central nervous system and may cause vomiting and diarrhea.”²¹⁸ But it still allows this chemical in vaccines.

- ◆ *Polysorbate 80*. This common preservative can cause *anaphylaxis* (also known as *anaphylactic shock*)—an instant, severe, life-threatening allergic reaction involving the immune cells. Symptoms include abnormal levels of swelling that can obstruct tissues including those of the heart (leading to low blood pressure and cardiac arrest), the throat (leading to obstruction in the air passages and suffocation), and the brain (leading to a coma and eventual death). Polysorbate 80 has been used to help drugs cross the blood brain barrier; so it will also bring any vaccine pathogens into the brain. If thimerosal is in the vaccine, the Polysorbate 80 will facilitate the passage of mercury into the brain as well.
- ◆ *Triton X-100 / benzyl-polyethylene glycol tert-octylphenyl ether / oxtoxynol-10*. A detergent common in influenza inoculations. It’s used to disintegrate the virus particles and other ingredients, and prevent them from clumping or aggregating. The Material Safety Data Sheet for this chemical states that it may be harmful if swallowed or absorbed through the skin (because it gets into the bloodstream, just as it does via injection). Triton X-100 also disrupts the mitochondria (fuel burning units of the cells). Interestingly, autism and other neurodegenerative diseases are now being labeled as mitochondrial disorders.

Adjuvants, the Secret Ingredients

The main ingredient in vaccines that people usually think of is the pathogen(s) against which they’re being inoculated, and perhaps secondarily, a preservative such as thimerosal. But all vaccines contain other ingredients, some of which are truly secret, because no laws exist requiring vaccine manufacturers to disclose everything that’s in their formulas. These unlabeled substances have negatively impacted inoculated people’s lives, especially because they have no way of protecting themselves from—or preparing for possible adverse reactions to—secret ingredients.

Many unlabeled ingredients are used as adjuvants. *Adjuvant* (from the Latin word *adjuvare*, “to aid”) is a pharmacological term for a substance that modifies the effects of another material. Adjuvants are put into inoculation formulas to elicit an abnormally intense antibody response so that smaller amounts of pathogen material can be used. In addition to stimulating a stronger-than-usual immune response, sometimes an adjuvant will

Which brings me to the second condition. There are two ways to increase glutathione levels: by providing the body with enough of the required raw materials so it can make it, or by taking glutathione supplements.

Foods that help either boost or maintain glutathione levels include some fruits (grapefruit, cantaloupe, peach, watermelon and strawberries), and vegetables (asparagus, avocado and spinach). Vegetables that contain lots of sulfur are especially helpful: onions, garlic, broccoli, kale, collards, cabbage, cauliflower and watercress. Raw eggs and grass fed meats contain sulfur. Whey, a protein formed when cheese is made, is especially high in sulfur, and it's available in powdered form at any health food store. You will need *cold-pressed* whey, which means that the proteins have not been *denatured*, or broken down by high heat during processing.

In the herbs department, milk thistle is popular and very effective for the liver. Often known by the name of its most active chemical compound, *silymarin*, milk thistle helps prevent glutathione from being depleted in the liver. It also helps protect the liver from solvents and other chemicals. A less easily obtained, but very powerful Chinese herb is *Platycodon grandiflorus*, also known as Balloon Flower Root or jiegeng. This herb is used a great deal in Chinese medicine because of its anti-inflammatory properties and its ability to increase intracellular glutathione.

A few commonly available nutritional supplements boost glutathione levels. Alpha Lipoic Acid (ALA) not only increases the amount of intracellular glutathione, but it's a powerful antioxidant that makes other antioxidants (such as Vitamin C and Vitamin E) more potent. Another vital nutrient, available in powder or capsule form, is N-Acetyl-Cysteine (NAC). Derived from the amino acid L-cysteine, NAC is a *precursor* of glutathione: once in the body, it's rapidly transformed or metabolized into glutathione, a more chemically stable compound. (NAC is so effective, it has even been approved by the FDA as a treatment for aspirin overdose.) Selenium, a powerful essential trace mineral, helps the body recycle and produce more glutathione.

A group of three nutrients, which work together and are considered perhaps the most critical to support the body's own glutathione production, are the biologically active form of folate (5-methyltetrahydrofolate, or simply methylfolate), the biologically active form of Vitamin B6 (Pyridoxal 5-Phosphate, or P-5-P), and the biologically active form of Vitamin B12 (methylcobalamin). These are discussed in great detail in Chapter 3.

The superior doctor prevents sickness.
The mediocre doctor attends to impending sickness.
The inferior doctor treats actual sickness.
—Chinese Proverb

What about supplementing with glutathione itself? Some glutathione supplements are worthless because, as a small molecule, glutathione is easily digested by the stomach acid and is therefore not available to the rest of the body's cells. This may be why many establishment and holistic medical personnel advocate the intravenous (IV) delivery of glutathione. However, injectable nutrients must be administered by a licensed health professional, and are therefore costly. Thus, there may be a bias to the claim that only IV glutathione is well absorbed.

At least one form of oral glutathione is highly effective: *reduced* glutathione. Reduced glutathione bypasses the digestive processes intact, and is easily absorbed by every cell—including those of the eyes, liver and brain—if it's accompanied by suitable biochemical transporters. A few proteins act as glutathione transporters, one of which is disulfide bond cysteine. Articles that discuss the bioavailability of ingested glutathione include “Glutathione Transporters,”³⁷⁸ “Enhanced Glutathione Levels in Blood and Buccal Cells by Oral Glutathione Supplementation,”³⁷⁹ and

“Plasma membrane glutathione transporters and their roles in cell physiology and pathophysiology.”³⁸⁰

In the 1970s, a doctor discovered a special whey protein, gamma-glutamyl-cysteine (GGC), which is a vital precursor to glutathione and is easily converted in the body. Whey, rightly promoted for its immune-supporting role, is generally well tolerated; but those who are especially sensitive to dairy may prefer another form of oral glutathione, *liposomal* glutathione. Here, the glutathione molecule is surrounded by a single thin layer of lipids (oils), which allow the glutathione to survive stomach acid and enter the cells directly. (Chapter 3, **Nutritional Supplements**, contains a recipe for making liposomal Vitamin C. This can be tried with ordinary, non-reduced glutathione as well.)

One novel way of getting glutathione into the body is in the form of patches. One company manufactures round adhesive bandages, a little less than 1.5 inches, that are placed on the skin over acupuncture points. These patches contain homeopathic remedies and other substances that don't penetrate the pores of the skin, but instead, transfer the *energy* of their ingredients to deep inside the body, thus inducing the production of endogenous glutathione.

Glutathione is essential for disease prevention. Vaccines cannot compare to glutathione's superior benefits and biocompatibility. Glutathione is essential for detoxifying from any poisons. And it's impossible to take too much.

One more thing. Colostrum contains glutathione.

Vitamin C

Vitamin C is most commonly known as *ascorbic acid*, (which is shorthand for “hydrogen ascorbate”). However, this vitamin also comes in the form of alkaline mineral ascorbates: sodium, calcium, magnesium, and potassium ascorbate. The ascorbate ion always attaches to another ion; hence, the compound name.

Vitamin C is a critically important nutrient. Involved in the growth and repair of every tissue, it’s a component of *collagen*, a protein found in skin, cartilage, tendons, ligaments, blood vessels, portions of the nerves and eyes, and the connective tissue membrane (*fascia*) that covers the muscles and spreads in a complex network throughout the entire body. These structures don’t work properly if there’s not enough Vitamin C to help build them. Vitamin C heals wounds and helps repair and maintain bones and teeth. As one of the top antioxidants, it protects DNA from damage and helps the body remove heavy metals and other toxins. It protects the cell membranes from toxic wastes and destruction. And it helps the body fight all types of infections, including cancers.

A May 2013 issue of *Nature Communications* published an article, “Mycobacterium tuberculosis is extraordinarily sensitive to killing by a vitamin C-induced Fenton reaction.”³⁸¹ (A *Fenton reaction* is the chemical catalyzation of the production of hydrogen peroxide. Hydrogen peroxide scavenges various pollutants including formaldehyde, which makes Vitamin C so helpful for detoxifying from the effects of vaccines.) Vitamin C cannot eradicate all pathogens, but it does help with many viruses and bacteria, including *Herpes*, *H. pylori*, influenza, and more—even Ebola.

Nobel Prizewinner Linus Pauling, PhD, helped make the public aware of ascorbic acid’s many features. In a 1992 issue of *Journal of Orthomolecular Medicine*, he wrote, with co-author Matthias Rath, “Ascorbate deficiency is the precondition and common denominator of human CVD [cardiovascular disease].”³⁸² We are commonly taught that a long term Vitamin C deficiency results only in scurvy, a condition of overall weakness and tenderness of the tissues, bleeding and bruising of the mucous membranes and skin, brittle bones, and anemia (insufficient amounts of red blood cells). But before the body reaches this point of severe deficiency, a tremendous amount of damage has

already occurred. This is because Vitamin C is critical to so many structures and functions of the body. It’s so important, in fact, that despite its easy availability, Vitamin C is undervalued and underutilized. It may be one of the most publicized, yet least understood, nutrients.

Because Vitamin C is water soluble, it doesn’t accumulate in the fat cells. It’s excreted daily by the body in urine and sweat, and therefore must be replaced each day. Replenishing this most important nutrient is even more critical because unlike most mammals, which produce ascorbic acid in their own bodies, humans

don’t have this capacity. Even high quality foods don’t supply us with nearly enough; and Vitamin C is destroyed by heat, so supplementation is essential. The benefits of Vitamin C are increased when taken with Vitamin E.

The medical establishment claims that few people are deficient in Vitamin C. However, the number of illnesses and degenerative conditions suffered by a majority of the population

prove that these claims are false. Dr. Pauling himself took what some consider to be massive doses: at least one gram daily (1 gm = 1,000 mg), in staggered 100 mg amounts throughout the day. The average adult, he said, required between 10 and 12 grams daily. The body governs the amounts, Pauling taught us, and its rule is simple. If you develop diarrhea, take less. If you don’t develop diarrhea, take more. Decrease a bit when you just reach the point where you start to experience loose stools.

Aside from diarrhea—which is the body’s way of indicating that more ascorbic acid is being ingested than what the system can handle at the moment—it’s impossible to ingest too much. For immune support for adults, many sources recommend 2,000 mg (2 gm) per day. Owen R. Fonorow of The Vitamin C Foundation mentions that an orthomolecular practitioner might suggest 5,000 mg of ascorbic acid daily. Especially for people who are ill, this may be a more suitable figure than a lesser amount, considering (as Pauling pointed out) that about half of the Vitamin C taken orally is broken down before reaching the cells, and is thus biologically unavailable.

One more thing. Vitamin C comes in four shapes whose atoms are arranged differently (some being mirror images of the others). The only form that can help build collagen is the L-ascorbate shape. Therefore, make sure you take this one, and that it’s labeled correctly.

Vitamin C is the world’s best natural antibiotic, antiviral, antitoxin and antihistamine. . . . orthomolecular (megavitamin) therapy concentrates on vitamin C. Let the greats be given their due. The importance of vitamin C cannot be overemphasized.

—Andrew W. Saul, PhD
clinical nutritionist,
biologist, orthomolecular specialist,
and author of *Fire Your Doctor:
How to Be Independently Healthy* (2005)

with fighting lawsuits, trying to influence legislation by pouring money into campaigns, attacking critics, infiltrating public bodies, pouring more money into its PR spin machine, funding ‘travel expenses’ for pro-GM scientists, lobbying the EU to try to get GMOs into Europe, mounting a campaign against WHO-associated scientists, . . . managing its profits courtesy of the massive subsidies given to US farmers, [or] working with the Gates Foundation to uproot indigenous agriculture in Africa.”⁴⁰⁸

In 2000, the FDA won the lawsuit instituted by Druker. However, at least one lawsuit has had a just outcome. In California, as part of his school groundskeeper job, 46-year-old Dewayne Johnson had been required to regularly handle Roundup® weed killer. Even though he wisely used protection, he still contracted non-Hodgkin’s lymphoma. So in August 2018, a California jury ordered Monsanto to pay Mr. Johnson \$289 million for failing to properly label the product and acting with malice and oppression due to its reckless disregard for human life. Of course, Monsanto is planning to appeal.

Monsanto’s sales offices, factories and research centers (in over one hundred countries) have multiplied since its merger with the Bayer corporation. Bayer also has a dark history. Known as I.G. Farben during World War II, Bayer used Jewish slave laborers, manufactured the poison used in gas chambers to kill concentration camp prisoners, and its scientists (later convicted for war crimes) experimented on prisoners. Today, Bayer sells over 90% of the world’s genetically modified seeds and most of its pesticides and herbicides. The corporation is also working hard to receive patents for the DNA of both animals and humans.

Granting Legal Immunity

The FDA has protected drug companies so rigorously that ethical US government officials finally began to notice. So did the press. *New York Times* reporter Gardiner Harris, who often writes about medical politics, wrote in 2004:

The chairman of a House committee angrily accused the Food and Drug Administration on Thursday of withholding documents on the effects of antidepressants on children. Holding a copy of an e-mail message from an agency official instructing others in the agency not to unearth documents, . . . Joe L. Barton . . . said it demonstrated that the agency was deliberately defying the panel. He threatened to ask police officers to go to the agency’s offices to retrieve the records.

“The FDA’s lack of cooperation with the committee in obtaining relevant and responsive

information in a timely fashion on a matter that involves the safety of our children leaves me wondering whether this is sheer ineptitude or something far worse,” Mr. Barton said. . . .

Seven top executives from drug giants like Pfizer, Wyeth and Glaxo-SmithKline were sharply questioned about why the companies had collectively failed to publish or publicize results of studies showing that their drugs had not proved effective in treating depressed teenagers and children.⁴⁰⁹

As one might expect, with the rapid escalation of such negative publicity, the FDA began to defend itself. In July 2006, a *New York Times* headline read, “FDA Rules Will Regulate Experts’ Ties to Drug Makers.” The agency apparently stated that new rules would make it:

impossible for experts who get money from drug makers’ marketing departments to serve on advisory committees. That would exclude, for instance, anyone who was paid by the marketing departments to promote drugs. . . . [However] Agency officials said they had no intention of excluding all advisers with ties to drug makers.⁴¹⁰

In other words, the FDA had no intention at all to behave ethically, as its continued behavior has proven. For now at least, consumers of pharmaceuticals are unprotected. Even in cases of serious damage or death, as long as drugs or medical devices have been approved by the FDA, pharmaceutical companies have no legal liability, even if:

- ◆ The item’s label is insufficient or deceptive.
- ◆ Approval of the drug/device has been based on incomplete testing.
- ◆ The company had misled the FDA into approving the product by submitting falsified reports.
- ◆ The FDA received reports of damage or death associated with the products.
- ◆ The FDA failed to warn of the product’s dangers after receiving complaints.

Big Pharma’s glaring misdeeds are becoming more visible than ever. Before reaching for the medicine cabinet to pop a pill, or seeing your doctor for an injection, consider how many drugs you really want to be taking—and ultimately, if the risks are worth it, particularly when there are safe and effective alternatives. The rest of this book discusses our options; but for now, let’s briefly examine some more problems.

DRUGS WHERE THEY'RE NOT INTENDED

It's bad enough that most drugs don't work and have undesirable "side" effects. But at least those of us who choose not to medicate ourselves don't have to—right? Not exactly.

Antibiotics in Food

Many people who are afflicted with an infection find it comforting to take antibiotics. According to Null and colleagues, in the United States between 3 and 5 million pounds of antibiotics are used on humans every year. "With a population of 284 million, . . . this amount is enough to give every man, woman and child 10 teaspoons of pure antibiotics per year."⁴¹¹ The misuse of antibiotics is rampant. Almost half of the people with upper respiratory tract infections receive antibiotics from their doctor, even though the CDC cautions that 90% of these infections (including children's ear infections) are viral. Antibiotics cannot destroy viruses.

Alas, humans are not the only ones given antibiotics. In 2003, Null et al. reported that about 25 million pounds a year were used on animals raised for food—and that of this amount, over 23 million pounds were given not to treat disease, but to try to prevent it (as well as to stimulate growth). By 2009, according to the FDA, the number of pounds of antibiotics used on animals raised for food had climbed to 29 million pounds. Put another way, farm animals get 80% of all antibiotics sold in the US.⁴¹²

The need for disease prevention is due to the unnatural and stressful conditions under which factory farmed animals are forced to live. These animals are confined in crowded quarters, with a deficit of sunshine and fresh air, and forced to consume food they were never meant to eat. This is discussed more in Chapter 3. Overuse of antibiotics, Null and colleagues reported:

[results] in foodborne infections resistant to antibiotics. Salmonella is found in 20% of ground meat but constant exposure of cattle to antibiotics has made 84% of salmonella resistant to at least one anti-salmonella antibiotic. Diseased animal food accounts for 80% of salmonellosis in humans, or 1.4 million cases a year. . . . Approximately 20% of chickens are contaminated

with *Campylobacter jejuni* causing 2.4 million human cases of illness annually. Fifty-four percent of these organisms are resistant to at least one anti-*Campylobacter* antimicrobial.⁴¹³

We've known for two decades ago that the antibiotics people are forced to eat and drink have conferred antibiotic resistance in germs. In Scandinavia and other parts of the world, it has been found that decreasing the amount of antibiotics given to animals has little effect on food production costs. However, the US has not shown the same incentive in minimizing or eliminating this practice.

Excess antibiotic use has even affected plants. Both organic and conventional crops that are grown with manure from antibiotic-fed animals are taking in the drugs through their roots. Thus, whoever eats the plants takes in unwanted drugs as well.

Drugs in Drinking Water

People who are careful to limit their intake of pharmaceuticals, or who avoid taking them entirely, may still unwillingly ingest all kinds of drugs every time they take a sip of water. Detectable levels of drugs exist in virtually every body of water today, worldwide. According to the Environmental Protection Agency, whether the river, lake, creek, aquifer or groundwater is urban or rural, obviously dirty or seemingly pristine, it contains drugs. Our water also contains drug metabolites, which are byproducts, produced by the body, of the primary ingested chemicals.

How do drugs get into our water supply? The metabolites are excreted in urine. Hospital personnel flush expired and unused medications down the toilet. Consumers are sometimes advised to do the same. Drug companies pump waste from the manufacture of pharmaceuticals into nearby, convenient water bodies. These chemicals are not removed by most municipal filtering systems, which use even more chemicals to treat the water rather than the much safer, and very effective methods using carbon filtering, ultraviolet light, and ozone.

"An aging population and our growing addiction to pharmaceuticals may have disastrous consequences for our water supply," writes Elizabeth Royte in "How Prescription Drugs Are Poisoning Our Waters." She describes how massive amounts of drugs move through the systems of the elderly into the water system:

Since [US President] Obama appointed his crony Margaret Hamburg as FDA Commissioner in 2009, the FDA has collected over \$2.3 billion [in donations] from major drug companies including Bristol-Myers, Merck, Johnson & Johnson, Pfizer, GlaxoSmithKline, and Eli Lilly.

—Jenny Thompson
Director, The Health Sciences Institute
(undated quote)

Heritage Village [is] a sprawling retirement community in western Connecticut. . . . [Its approximately 4,000 residents] take an average of six drugs a day. And that's a healthy population.

In a convalescent home a few miles away, Patricia Reilly, age 88, wheels herself each morning toward a low shelf. With a glass of water and small cups of applesauce at the ready, she prepares to take her morning medicines: nine different types that treat heart disease, acid reflux, renal stones, a chronic urinary tract infection, chronic constipation, migraine headaches, depression, allergic rhinitis, degenerative arthritis, and intermittent vertigo. The 120 residents of River Glen Health Care Center, where the average age is 90, take an average of eight drugs a day; the most common among them target high cholesterol, high blood pressure, depression, and diabetes. Once swallowed, . . . [the medicines'] biological activity won't stop once they leave her body.

When residents of Heritage Village and two other nearby retirement communities flush their toilets, wastewater laced with traces of prescription drugs rushes through a series of pipes into the Heritage Village treatment plant. . . . Through a process of settling and aeration, the Heritage Village plant separates liquids from solids, treats the liquid portion with disinfectant, and then discharges this effluent into a mini-creek . . . The effect of those drugs on the environment, and possibly on those who drink water pumped from those streams, is only beginning to be understood.⁴¹⁴

The effects of environmental medications are extensively documented. These examples are summarized from Royte's article.

- ◆ A Baylor University researcher found tiny amounts of Prozac[®] in liver and brain tissue of channel catfish and in black crappie captured in a creek near Dallas, which receives almost all of its flow from a wastewater treatment plant.
- ◆ A University of Georgia scientist found that tadpoles exposed to Prozac[®] morphed into undersize frogs, vulnerable to predation and environmental stress.
- ◆ The EPA reports that antidepressants can have a profound effect on spawning behaviors in shellfish, and that calcium-channel blockers (used to relieve chest pain and hypertension) can dramatically inhibit sperm activity in some aquatic organisms.

- ◆ Even at extremely low levels, ibuprofen, steroids, and antifibrotics (drugs that help reduce the development of scar tissue) block fin regeneration in fish.
- ◆ According to a report by the Scientific Committee on Problems of the Environment and the International Union of Pure and Applied Chemistry, more than 200 water and land species have suffered adverse endocrine disruption due to medicinal and synthetic estrogens.

Fish, frogs, and lab rats aren't the only life forms that are negatively affected by drugs. People are being affected too—on behavioral, cognitive, immune, neurological, and reproductive levels. Mercury, produced from the burning of coal and hazardous waste, the manufacture of chlorine and cement, and the refining of metal, is in our water supply as well as in vaccines and dental amalgams. Another long-term danger is synthetic estrogen in the environment, found in medicines and in most plastic containers that store foods. Not only does synthetic estrogen cause lowered sperm counts in males, but it feminizes male infants and children and even adult men. Males may suffer not only enlarged breasts, but also psychological damage. High levels of synthetic estrogens are flooding male (as well as female) fetuses, and this affects brain structure and function. Some practitioners are beginning to wonder if this hormone mismatch is partly behind the growing trend toward transgenderism, the feeling that one is born into the wrong-sex body.

Generally, a health risk assessment is based on the analysis of one chemical at a time. But this approach doesn't accurately reflect exposure to many chemical compounds at once. A 2002 US Geological Survey found traces of 82 different contaminants—including drugs, fertilizers, and flame retardants—in surface waters across the United States. The drugs included antibiotics, antidepressants, hormones, blood pressure pills, and painkillers.

Toxicological expertise now exists to assess the effects of many chemicals combined, which is how they are found in our environment. Whereas a single chemical might not have produced an effect, it takes lesser amounts, and lower levels of exposure, to produce symptoms when someone is exposed to chemical stews.

"I'm worried for fish populations, and I'm worried for human populations," says environmental endocrinologist David Norris. "The levels found in Boulder Creek [a body of water he studied] are low in absolute terms, but they aren't low on the biological level. You could have six chemicals below the no-effect level, but all together they are above the no-effect level."⁴¹⁵ This is why our symptoms from chemical cocktails are considered iatrogenic disease by Null and his colleagues.

ELECTRONIC MEDIA AS A DRUG

Sonograms

It must be hard being a child or teenager today, especially in a highly industrialized nation like the United States. Here, even young children are impacted by national debt and poverty (one in forty-five children is homeless). Wars and civil unrest have regularly become front page headlines, causing many children to grow up with anxiety about their uncertain futures. The average person's diet is laden with sugars, artificial chemicals and dyes that cause hyperactivity, cancers and other health problems (discussed in depth in Chapter 3). Many people are too poor to buy foods that are organic, or which at the very least don't contain GMOs. Plus, meaningful education is often elusive. People experience the most intense growth spurt of their lives when they're children and they need to discharge their boundless energy in physical ways. Yet instead, they must endure hours of classes that are usually boring and irrelevant. Unable to tolerate what no adult would willingly undergo—sitting still in what amounts to an indoor prison—children are labeled “ill” and forced to take mind-altering drugs. It's no wonder that electronic media has provided such a respite from the world and its ills. Never in human history have so many children grown up wired and plugged in, even before birth.

The first direct exposure to electronics occurs in the womb. In technologically advanced nations, pregnant women usually receive one or more *ultrasound* tests, each of which produces a picture called a *sonogram*. Ultrasound uses very (“ultra”) high frequency sound waves above the range of human hearing, ranging from 1 or 2 MHz (megahertz) to 18 MHz. (The lower the frequency, the more the signal penetrates. The higher the frequency, the less the signal penetrates.) Ultrasound machines generate sound waves in pulses of less than one ten thousandth of a second. Pulses are utilized because a continuous sound wave can generate too much heat in the tissue.

There are many applications for ultrasound. Depending on what frequency range is being employed, ultrasound can promote growth (such as regenerate bone) or destroy material (such as break apart kidney stones or gallstones). Ultrasound can also heat tissue to the point of causing damage. It can induce neurons to misfire, and poke holes in cell membranes.

Using common sense, why would anyone think that intruding upon the continuous, seamless development of the fetus, which has for millions of years completed its work without assistance, be without consequences?

—Caroline Rodgers

“Questions About Prenatal Ultrasound and the Alarming Increase in Autism”

Midwifery Today, Winter 2006

The application of ultrasound that's pertinent to our discussion is its ability to create an image of an object or structure inside the body. That image can be the stomach, liver, heart, gallbladder, a muscle—or a developing baby. The sound bounces off an object, and produces a picture based on the object's density and shape.

Originally designed for industrial use to detect flaws in metal, ultrasound for medical purposes was first used by a Scottish obstetrician in 1955. He initially experimented on various tumors, which he found produced different echoes. Soon after, ultrasound was aimed not only at women's abdominal tumors, but also on their pregnant bellies. Justified as useful for detecting abnormal or insufficient growth in developing fetuses, the test became standard (and big business) in industrialized countries. However, no scientifically valid tests for safety were conducted. Just as with X-rays—which pregnant women were receiving for 50 years (to assess fetal size) before it was discovered that the X-rays were causing birth defects—it was simply *assumed* that ultrasound was safe.

But now, some researchers are finally acknowledging the complexities of how ultrasound actually works and the negative consequences of using it. The question is whether doctors and expectant parents are listening.

The physical effects of ultrasound include both its pressure on the water within and surrounding a given cell, and through the creation, oscillation (spinning), and implosion of bubbles in that same liquid. The latter is referred to as “cavitation” or the creation of a gaseous cavity within the liquid. Cavitation and noncavitation effects together can poke transient holes in cells, activate certain molecular pathways within those cells, cause temperature increases when the bubble violently implodes, promote the creation of free radicals (oxidation) when that gas escapes into the surrounding medium which can subsequently damage or even kill a cell, can cause general disarray within the cell, and at certain intensities may even promote mutations of DNA.

Most of the deadly effects on cells are generally not seen at diagnostic intensity levels. However, there is still the potential that ultrasound is altering how normal cells develop and behave. That is, it doesn't kill them, but it may very well change them.⁴¹⁶

Is the fetal reaction to ultrasound considered important? No, even though developing infants instinctively tend to move away from the stream of high-frequency sound waves (which should be a clue that the stimulus is harmful.) In 2004, the FDA warned that “ultrasound is a form of energy, and even at low levels, laboratory studies have shown it can produce physical effect in tissue, such as jarring vibrations and a rise in temperature.”⁴¹⁷ (Author Caroline Rodgers quotes this directly from an FDA web page she reported accessing in 2004. Yet, an Internet search I conducted eleven years later produced a version of the original page that did not include this passage.)

“Fetuses can hear ultrasound examinations” is the self-explanatory title of a *New Scientist* article published in 2001. Researchers inserted a tiny hydrophone inside a woman’s uterus while she was receiving an ultrasound. “Sure enough, they picked up a hum . . . similar to the highest notes on a piano. . . . When the ultrasound probe pointed right at the hydrophone, it registered 100 decibels, as loud as a subway train coming into a station. ‘It’s fairly loud if the probe is aimed right at the ear of the fetus,’ says [a research doctor, James] Greenleaf.”⁴¹⁸

Ultrasound can cause dyslexia, epilepsy, learning difficulties, and delayed speech in the infants. Women exposed to ultrasound have an increase in spontaneous abortions and stillbirths. In “Randomized prospective trial comparing ultrasonography and pelvic examination for preterm labor surveillance,” the authors write:

The overall rate of prematurity was 18%. Preterm labor was more frequent with ultrasonographic evaluation (52%) than with pelvic examination (25%) . . . In this prospective randomized study of patients at risk for preterm birth, patients under surveillance by ultrasonographic assessment of the cervix did not fare better than those assigned to bimanual examination.⁴¹⁹

Sonograms harm more than just the fetus exposed to the technology. In “Ultrasound—The Mythology of a Safe and Painless Technology,” presented to the Royal Society of Medicine in the UK in 1995, the speaker stated: “the subtle effects of ultrasound may not emerge until the next generation. No one mentions to women that when they are scanned their baby is already carrying the next

generation’s eggs, so when she becomes pregnant those eggs have already had x numbers of ultrasound scans.”⁴²⁰ The dangers of ultrasound technologies have been known for decades, but the medical establishment has chosen profits and the mechanization of medicine over people’s health. Ultrasound testing isn’t even very accurate. It produces a significant number of “false positives” for defects, making it a highly imperfect diagnostic tool.

Thus sonograms hurt the very baby that expectant parents are so eager to welcome into their lives. Ironically, a large number of these parents request a sonogram not to discover (and then possibly treat) a medical condition, but to have a “fun” photo—or even better, a series of photos—to document the growth of their child! This powerful, hazardous equipment has lost all pretense of having a medical purpose and is instead treated as entertainment: intrauterine photography. Note that the FDA’s current, restrained website page still cautions parents that to order a sonogram merely to possess a “keepsake” photo is a misuse of the medical testing (even though, the FDA still insists, the procedure is not dangerous).

Increasing concern has arisen regarding the fetal safety of widely used diagnostic ultrasound in obstetrics. Animal studies have been reported to reveal delayed neuromuscular development, altered emotional behavior, EEG (brain wave changes, anomalies, and decreased survival. Genetic alterations have also been demonstrated in *in vitro* systems.

—Marion Finkel, MD, 1979

Director, FDA Division of Metabolic and Endocrine Drugs,
then Deputy Director of the Bureau of Drugs,
and (later in 1974) head of New Drug Evaluation

Effects of Electronic Distractions

In our media-oriented, entertainment-happy culture, ultrasounds condition us to invite further bombardment from all kinds of electronic gadgets. Children clamor for (and receive) iPhones®, iPods®, video games, tablets, and computers. With these amazing devices, anyone can access information, diversion, amusement, escape, and people all over the world. While these activities can be enjoyable, the electronics are also playing a decisive role in harnessing people’s energy and even directing their minds. When used in excess, especially by children and teenagers, these devices can stunt growth as palpably as a poor diet.

Old style computers, TVs, and video games didn’t have flat screens. Bulky, heavy and rounded, the monitors utilized cathode ray tube technology at relatively high voltages, emitting a wide spectrum of noxious radiation including extremely low frequencies, “soft” X-rays, and radio frequencies existing within certain dangerous bands on the electromagnetic spectrum. While the newer flat screen technologies don’t emit these harmful wavelengths, they do cause damage.

Impaired Cognitive Abilities

Constant bombardment by electronic media can impair intelligence. I'm not just talking about content (although that can certainly decrease creative, original, and rational thinking!). I'm referring to visual bombardment, which affects the brain in some unexpected ways.

The visual cortex of the brain occupies a huge amount of space, compared to other areas. About 50% of the brain's nerve fibers are directly or indirectly linked to vision; and when the eyes are open, two-thirds of the brain's electrical activity is devoted to vision. Neurodevelopmental optometrist Merrill D. Bowan writes, "Vision is a bully: it tries to persuade our brain that what it is sensing through vision is the only reality, whether its perception is accurate or not." As an example, he cites what happens when the eyes look through a special pair of optical prisms. They "not only change the apparent shape of a vertical edge, but also how it feels"—in other words, one's *kinesthetic* sense, or perception of the position, weight, and movement of the body in space. One's kinesthetic sense doesn't exist independently of vision. When the eyes look through these prisms,

the edge will now actually feel bowed to the vast majority of people. Closing the eyes will extinguish the feeling of bowedness, and opening them restores it once again. Vision is integrated with the other senses and dominates them so fully that the brain has to almost stop, figuratively, and weigh the visual input with the proprioceptive [body sensing], the auditory and to a lesser extent, the gustatory and the olfactory data to be assured that the perceptions we're processing is accurate. As kids might say these days, "Vision Rules!"⁴²¹

Vision plays such a huge role in how we respond with our other senses, that learning—especially for infants, young children and teens—should ideally integrate the visual, auditory, and kinesthetic (tactile and movement) senses. Each sense exponentially adds to the enrichment of the others, which is why the best teaching environments for babies and children are multifaceted. When more than one area of the brain is used at the same time, neural pathway connections are created between these areas, which makes us smarter.

The complexity of the brain helps explain why language (to use one example) is based not only on auditory input, but also on vision, plus the ability to mentally process and interpret that visual input. In fact, the brain is so complex that even brainwaves are intimately connected to vision—which by definition includes eye movements.

The number and type of eye movements required to take in an entire, compressed scene on a computer or TV screen are vastly fewer—and different—from movements the eye would make if it were scanning the natural environment. Even if the TV is a huge widescreen model, the screen remains at a fixed distance. In comparison, for someone who's outside, the range of eye movements varies tremendously. The eye is constantly shifting: side to side, up and down, and from close to far away and back again. By definition, one cannot obtain this depth and breadth of field when viewing a stationary screen.

Simply put, *abnormal eye movements create abnormal brain wave patterns*. This is what prompted one academic to write: "Since the brain is organizing during the first years of life and since human beings evolved responding to three-dimensional stimuli, I wondered if exposing toddlers to lots of colorful two-dimensional stimulation could be harmful to brain development."⁴²²

A surprisingly large number of studies have indeed confirmed that "two-dimensional stimulation"—in this case, television—can harm the brain's development. One of the best studies, published in the April 2004 issue of *Pediatrics*, had the self-evident title of "Early Television Exposure and Subsequent Attentional Problems in Children." This was an important study because it was longitudinal—in other words, there was long-term follow-up. Researchers monitored the progress of 1,278 one-year-olds and 1,345 three-year-olds to the time they reached 7 years of age. At the end, their status was tallied. A total of 10% of all the children suffered from "attentional problems."⁴²³

A report on the same research appeared the following year in another publication, *Journal of the American Medical Association: Pediatrics*, titled "Children's Television Viewing and Cognitive Outcomes: A Longitudinal Analysis of National Data." The text of this study, which appears online in its entirety, is worth excerpting. "A large number of studies have reported deleterious effects of children's television viewing on outcomes such as obesity, inactivity, attentional problems, aggression, and sleep patterns." After statistically adjusting for "parental cognitive stimulation throughout early childhood, maternal education, and IQ," the authors concluded that "each hour of average daily television viewing before age 3 years was associated with deleterious effects" on several tests that measure reading recognition, reading comprehension, and intelligence.⁴²⁴

The authors were very careful to distinguish between educational and non-educational television programs. "Children who watch episodes of educational television, such as *Sesame Street*, *Mr. Rogers' Neighborhood*, and *Blue's Clues*, demonstrate improvements in educational domains

DRUG INTERACTIONS WITH HERBS AND NUTRITIONAL SUPPLEMENTS

Periodically, the media warns about unwanted interactions between drugs and nutritional supplements, or drugs and herbs. The problem of unwanted interactions is quite real, because a supplement or herb may cause the body to respond in ways that contradicts or counteracts the (desired) effects of a drug. Conversely, a supplement might augment a drug's effect, thus making the drug's effects even stronger. Most of the time, neither doctors nor those under their care are versed in these interactions. The possibility of unwanted effects is further compounded because many people don't tell their doctor that they are taking herbs and/or supplements (or even other pharmaceuticals) along with the prescribed drug.

The ways in which interaction reports are written often demonize the nutrients and herbs without giving a more complete, functional description of what is really occurring. The information below offers the facts from two different viewpoints. The allopathic angle, summarized from several sources (while remaining faithful to their tone), warns about herbs and other nutritional supplements as though they are interferences. The holistic viewpoint, which is mine, explains the *meaning* of these interactions, thus giving the reader the option to make an informed choice.

Herb/Nutrient	Allopathic Angle	Holistic Perspective
Bromelain	Can increase effects of blood-thinning drugs and tetracycline antibiotics.	Blood-thinning drugs and tetracycline antibiotics may become more potent when the subject consumes bromelain, a naturally-occurring enzyme that catalyzes other chemical reactions. Bromelain also has natural anti-inflammatory effects.
Echinacea	Might counteract immunosuppressant drugs such as glucocorticoids taken for lupus and rheumatoid arthritis. Might increase side effects of methotrexate.	Immunosuppressant drugs taken for lupus and rheumatoid arthritis are less effective if the subject takes echinacea because echinacea increases the production, motility and effectiveness of white blood cells. Rather than trying to eliminate symptoms by suppressing an overactive immune response, why not deal with the root cause. The noxious effects of methotrexate—called “side” effects to prevent us from seeing that all its effects are “primary”—are noticed more by the person who takes echinacea because echinacea stimulates the body's defense cells to do their job. One such task is to remove all poisons from the system.
Evening Primrose Oil	Can counteract the effects of anti-convulsant drugs.	Anti-convulsant drugs do not work as well when the subject consumes evening primrose oil, which contains naturally-occurring fatty acids that feed the brain and nervous system. We might want to look at the relationship of diet and toxins to convulsions.
Vitamin E	Can increase effects of blood-thinning drugs, aspirin, and some herbs.	Blood-thinning drugs and herbs work even better when Vitamin E is consumed. Vitamin E intake should be reduced to no more than 200 IU per day at least two weeks prior to any surgery; anything above that increases the risk of bleeding.
Fish Oil	Can increase effects of blood-thinning drugs, aspirin, and some herbs.	Blood-thinning drugs and herbs work even better when fish oils are consumed. Consider not taking the drug or herb and eat fish oil, a food, instead. (Molecularly distilled fish oil supplements are free of mercury and other dangerous heavy metals.) Decrease fish oil intake at least two weeks prior to surgery to discourage possibility of excess bleeding.
Gamma Linolenic Acid (GLA)	Can increase effects of blood-thinning drugs, aspirin, and some herbs.	See “Vitamin E” and “Fish Oil.” The same logic applies to GLA.

If there wasn't such a growing interest in (or validity to) natural therapies, establishment medicine and its agents wouldn't be trying so hard to bias people against them. Brody still writes for *The New York Times*. Although her bias against natural healing has softened somewhat, she is still an agent for allopathic medicine. Here is a good example of a journalist whose writing is not independent, but conforms to the political, editorial, and advertising agenda of the publication that pays her salary. Few mainstream reporters truly investigate. They don't review a wide enough range of scientific literature, they aren't receptive to credible representatives in the natural health field, and they rarely display common sense or critical thinking. Instead, they allow their biases to dictate what they write. Those who do ask important questions are fired, or harassed until they quit their jobs.

Despite the continual onslaught of mainstream propaganda, many people seem eager to try holistic protocols. It would be refreshing indeed to see the following, from Mike Adams, in *The New York Times*:

The US Food and Drug Administration, the agency that claims to be responsible for protecting consumers from dangerous food and drug products, has just surrendered its primary responsibility. Recently, an FDA advisory panel voted to recommend that a dangerous prescription drug, Tysabri[®], which was withdrawn from the market a year ago due to its promoting of a deadly brain disease, should now be put back on the market. . . .

The justification . . . to reinstate a drug with known deadly side effects is based on the idea that patients should now weigh the risks of dangerous drugs and decide for themselves whether the risks outweigh the benefits, if any. . . .

There are enormous problems with this new stance by the FDA. The first is that patients do not have the medical knowledge to understand and interpret the significance of these side effects that will no doubt only be mentioned in small print . . . [and] that most patients will probably ignore. . . . The second problem . . . is that it exposes a wicked double standard: With prescription drugs, patients should be able to weight benefits vs. risks, even for drugs that may kill you. But with herbs and nutritional supplements, no such decision is extended to patients. The FDA merely bans whatever natural substances it wishes, usually based on reports of very small numbers of people being harmed by extremely rare overdoses. . . . The FDA now sees its job as protecting the public

[Conventional, allopathic] medicine in our country has been on a crusade over the last 100 years to wipe out every other form of medicine. One of the things they did that was unique was they lobbied to make words legal only for them to use. Today in the US, only a medical doctor can diagnose a disease, prescribe something, and cure you. Nobody else can say "diagnose," "prescribe" and "cure." That means that nobody can cure you but a medical doctor. . . .

I can't say, "Chaparral is the cure for a tumour." . . . Pharmaceutical drugs are killing hundreds of thousands of people every year . . . In spite of that, they claim that two people were hurt with chaparral, so they have taken it off the market. And these claims aren't even substantiated. . . .

I can't say garlic is the cure for cholesterol or high blood pressure [even though] garlic has been shown to help our white blood cells not only defend us against cancer, but also to increase our ability to destroy tumors . . . Garlic has been found to stimulate inteferon production, enhance natural killer cells, stop tumor growth, and even reduce the associated pain of cancer. Most of the research has been done on cancers of the digestive tract. . . .

They have made the laws. So that makes me look stupid [and] impotent, and it makes the herbs look weak and wimpy. . . . I can't as a herbalist, say that an herb will cure, even though a lot of prescription drugs are made from herbs. This was a tactic by organised medicine to wipe out the opposition, by making them look silly and impotent . . .

They have the words . . . they control the high ground. They can walk out and say, "Yes, if you take this drug, you will cure yourself." But they hired lawyers and got the government behind them. If I say that, I go to jail. It isn't because the herbs don't work and the drugs are better, it's just because they have more money, they lobbied more and got the law passed in their favour. That is why people get this idea that herbs don't cure you.

—Richard Schulze, ND, MH

School of Natural Healing, Santa Monica, California
 excerpted from whale.to/a/herbal_q.html

from "dangerous" herbs while shirking safety responsibilities on truly dangerous prescription drugs. . . .

The FDA's position now comes down to simply this: Everyone needs to be protected from herbs and nutritional supplements, but no one needs to be protected from prescription drugs. . . . If the agency is now merely going to pass through drug safety decisions to doctors and patients, then why do we need the FDA at all?⁴⁴⁶

Suppressed Natural Cures

There have been so many attempts by the FDA to restrict natural remedies (if not ban them altogether), that it would take an entire book to document them all. This bullying has occurred with vitamins, minerals, amino acids, herbs, and more. Below are just three examples that show the many ways in which this control has been executed.

Ephedra

The stimulant herb *Ephedra sinica* (also called *ma huang*) has been used by the Chinese for over five thousand years. Its relative, *Ephedra viridis*, grows in the American Southwest and has been used for centuries by the Native Americans. The Mormons, who aren't allowed to have coffee, drink ephedra (nicknamed "Mormon tea"). Ephedra opens the air passages. It's helpful for asthma, allergies, colds, fever, headache, and gastrointestinal and urinary tract conditions. Despite its benefits, the FDA has tried to restrict its availability.

FDA intervention began in 2004 when an herbal weight loss supplement began causing considerable "side" (toxic) effects due to its ephedrine content. The problem was, the FDA failed to distinguish between ephedra and ephedrine. Ephedra is the whole herb. Ephedrine is one synthesized chemical of many compounds present in the whole herb.

We were using niacin [Vitamin B3] and niacinamide before the new psychiatric drugs entered the North American market. Our results were better and safer but we had no one to support us. While drug results were more often more dramatic, they were also much more dangerous. Eventually, it turned out that drugs, while helping in the short run and used in small doses, in the long run stopped the process of recovery long before the patients became well, and froze them into a chronic semi-invalid state from which they can not recover as long as they remain on the medication.

Today, 47 years later, orthomolecular vitamin treatment is still relatively unknown. The use of drugs is world wide and sanctioned by powerful drug interests, the professional associations and governments. It seems not to matter that huge numbers of patients are being denied their chance for full recovery. . . . Niacin has . . . been trampled on for the past 40 years by the galloping hordes of professional establishments, the American Psychiatric Association, governments, the FDA, the National Institutes of Mental Health, and by nearly every health-professional organization. It is a wonder that there are any orthomolecular doctors at all.

—Abram Hoffer, MD, PhD
whale.to/a/saul18.html

Another problem that the FDA failed to address was the amount. A 50-mg serving of whole ephedra herb contains only about half a milligram of ephedrine, compared to a comparable dose of synthesized formula, which contains 20 mg of ephedrine. Incredibly, the FDA scientists missed (more likely ignored) this significant difference. They heavily regulated the natural herb, but not the synthetic ephedra alkaloids, which drug companies had been producing for years. Mary Marino writes:

Almost every cold, cough, or allergy product on the market made by the drug companies such as Sudafed[®], Actifed[®], Advil[®] cold and cough formula and others contain synthetically produced versions of the ephedra alkaloid pseudoephedrine. These products are readily found on the shelves of almost every grocery store, drug store, convenience store and pharmacy outlet in the country. . . . To say that natural ephedra kills and a synthetic version of one of its alkaloids found in drugs doesn't, is pure hypocrisy.

How can [the FDA] honestly justify banning ephedra which they claim is killing people yet leave all of the pharmaceutical products on the market containing the same alkaloid that occurs naturally in ephedra? . . . If ephedra is as dangerous as the FDA says, why not ban every product in this country that has any trace of ephedra alkaloids in them instead of taking cheap shots at the supplement industry while protecting the pharmaceutical industry? The fact is, natural ephedra products were taking business away from the pharmaceutical industry.⁴⁴⁷

Not surprisingly, the FDA ignored an existing law that was already regulating sales of natural ephedra. This law was so strict *prior* to the newer ban, reports Marino, that all labels bore strict warnings "listing a number of possible contraindications, including warnings that persons under the age of 18 couldn't buy ephedra and shouldn't take ephedra. Some stores even went as far as locking up their ephedra products in special cases behind the counter."⁴⁴⁸ The newer (stricter) ruling was eventually overturned. Also not surprisingly, in some parts of the US and online, high doses of the synthetic analog are still being sold.

The sleight-of-hand that occurred with ephedra is typical. A synthetic version or extract of an herb causes damage; the FDA bans or restricts the original plant; and the synthesized pharmaceutical is still allowed to be sold. This confusion is unnecessary, and the FDA's deception does not appear to be an accident. Unfortunately, an aware consumer must be vigilant at all times. Assume the worst about regulations, stay informed, and ask questions.

Aloe Vera

There are over three hundred species of aloe vera, a succulent (water-storing) plant that grows abundantly in warm climates. Six thousand years ago, Egyptians called it “plant of immortality,” and some Native American tribes have referred to it as “wand of the heaven.”⁴⁴⁹ Aloe is easy to cultivate and grow. Most of the plants, which have a similar chemical profile, contain six natural antiseptic compounds (including hydrogen peroxide), which kill bacteria, fungi and molds, and viruses. Their other compounds include twelve vitamins (including B12), twenty minerals, eighteen amino acids, enzymes, lignins, anthraquinones, saponins, fatty acids, salicylic acid, and sugars. These sugars are also known as *polymannans*. Different polymannans have different molecular sizes; and it’s the size of the molecules that determines their healing applications.

The soothing gel from the aloe leaf is used in herbal remedies, skin gels, toothpastes, drinks, and even cosmetics. The gel, stripped straight from the fresh leaf, or the juice extracted from the leaf, can be rubbed on the skin for insect bites, rashes and burns; poured into open wounds; swallowed to lower blood sugar levels and to eliminate hemorrhoids, stomach ulcers, urinary tract infections and prostate problems; and massaged into the gums for mouth infections.

The species of aloe pertinent to our discussion is *Aloe barbadensis Miller* because of its effect on the body’s immune cells. Of over two hundred scientific papers on aloe’s benefits, some show that the plant calms a hyperactive response or boosts a lethargic response, depending on what’s needed: “In vivo evidence of the immunomodulatory activity of orally administered Aloe vera gel”⁴⁵⁰ and “Studies on Immunomodulatory Activity of Aloe vera.”⁴⁵¹ “Immunomodulatory effects of Aloe vera and its fractions on response of macrophages against *Candida albicans*” states, “Aloe vera has been shown to modulate the immune response.”⁴⁵² Given aloe’s powerful effect on the immune cells, it’s natural that someone would think of using it to cure cancer, and it’s here that our story of FDA suppression begins. This is a typical illustration of how the FDA tries to eliminate any natural remedy that’s inexpensive, safe and effective, and which thus competes with a pharmaceutical poison.

Aloe as a healing agent for cancer was first brought into the spotlight by Dr. Ivan E. Danhof. His credentials are impressive. Holding both MD and PhD degrees (his specialty was in gastroenterology), he published more than eighty research papers, was a Fulbright scholar, worked as

a consultant to several pharmaceutical research institutes, and served on FDA review panels (dealing mainly with gastrointestinal drugs). With an extensive background in nutrition, microbiology, chemistry and herbology, Danhof is considered the world’s leading expert on aloe vera. His nickname is “Father of Aloe.”

It was in the late 1990s that Danhof developed a novel and effective treatment for cancer using aloe. Then called “Albarin,” it’s now referred to as *polymannose extract*, or simply *PME*. PME is a long-chain sugar that naturally exists in many carbohydrates, including aloe. Dr. Danhof removed some undesirable (naturally occurring) toxic compounds from the aloe, and then began clinical trials.

He utilized only the large-molecule PMEs. “The very large molecules,” Danhof explained, “are immune modulating, which have a powerful healing effect on AIDS, cancer and many different immune system disorders. It is also this large molecule that causes the body to produce a natural chemical, tumor necrosis factors, which functions to shut off the blood supply to tumors.”⁴⁵³

**Patients who get well
when they are not
supposed to are not having
spontaneous remissions.
They’re experiencing
self-induced healing.**

—Bernie Seigel, MD
“Mind Over Cancer,” 1988

It was a brilliant strategy to extract and use the desirable PME molecules. The PME “tells” the immune cells exactly what they should be targeting, and how. Thus, the immune cells can efficiently perform the correct jobs instead of arbitrarily attacking normal body tissue and causing an autoimmune response. Danhof, along with a few other astute researchers, understood that the ability of the mannose molecules to induce molecular signalling was even more important than any of their other (albeit excellent) properties. *Molecular signaling* is the ability of a molecule in a substance to affect the behavior of other cells it contacts. The signaling molecule conveys instructions without being consumed itself in a chemical transformation, just as a computer program on a CD or flash drive runs when it’s placed in a computer, but is not destroyed. Aloe carries clear and correct messages, and the implications of this are profound, even beyond a cure for cancer.

For Danhof’s clinical trials, he enlisted the close assistance of medical doctor Daniel Mayer and nutritionist Joseph Di Stefano, who ran two clinics in Florida, US. The PMEs were always injected because the digestive tract has a hard time absorbing them. Cost of the therapy was \$1200 (less than the price of one chemo session), for as many injections as needed, until the person went into remission. This typically occurred between twenty-five and forty injections. No promises of a cure were made. If someone couldn’t afford treatment, therapy was provided at no cost.

The cancer trials were not advertised. People heard about them through friends, relatives, and acquaintances. The clinic treated over one hundred people labeled “terminal,” whom doctors had sent home to die. Ninety-four people survived, with no undesirable effects from the injections: a success rate of about 80%.

Then the problems began—caused not by those who came for treatment, but by establishment doctors. Local oncologists, who were losing business, complained to the FDA. This occurred around the time that the researchers were starting to file paperwork with the FDA to receive approval of Albarin as an IND (investigational new drug) for cancer treatment.

The first raid occurred in early October 2001. John C. Hammell, head of the International Advocates for Health Freedom, reports.

Joe Di Stefano exited his medical clinic at midnight after a long day’s work, and was startled to hear strange noises coming from the dumpster in the back.

Trash was strewn all over the ground. He peered over the top of the dumpster and caught two strangers red handed, with rubber gloves on, probing through his dumpster, trespassing on his property without a search warrant. Then he noticed their unmarked car nearby. Obviously they just assumed no one was there late at night.

When Joe demanded to know who they were, and what they thought they were doing in his garbage, they would not identify themselves and had the nerve to say, “We’re looking for boxes.”

“Sure you are,” said Joe, “everyone looks for boxes at midnight in a dumpster with rubber gloves on.” . . . It turned out that these “dumpster divers” were *FDA agents* seeking evidence to obtain a search warrant against Joe Di Stefano’s clinic.

A week later on October 11, 2001, 120 agents from the FDA, DEA, Customs, U.S. Marshall’s Service, Florida Department of Law Enforcement and the Hillsborough County Sheriff’s Office raided Joe Di Stefano and Dr. Mayer’s clinics in Tampa and St. Petersburg, Florida. The home of Joe Di Stefano was also raided. Joe’s personal property, including his children’s computers that they needed to do their schoolwork, was seized as the agents made disparaging and insulting comments to Di Stefano and his wife, Georgeann.

When the FDA agents attacked the clinics, patients were being administered various therapies by IV injection. The law enforcement officials asked the patients if they wanted to be unhooked from their IVs, but not a single one said yes.

Paul Schebell, with stage 4 liver cancer who’d seen marked improvement during three months of treatment, said directly to the FDA raid leader, “We’re all adults here making free will choices. Why don’t you get out of here and leave us alone?” . . . A simultaneous raid occurred against Ivan Danhoff . . . The compounding pharmacist who prepared the aloe extract (Jerry W. Jackson of Allied Pharmacy Services, Arlington, Texas) was also raided.

Seized in the raids were the aloe extract (Albarin), all patients’ charts, along with all computers and other business records. The purpose of the October 11, 2001 FDA raid was to stop cancer patients from being able to use this intravenous form of aloe vera . . .⁴⁵⁴

In those early clinical trials, Albarin caused tumors to shrink, significantly relieved pain, increased energy levels, and caused remissions in people who had advanced stages of cancer. Interestingly, Dr. Danhof pointed out that Albarin “had a history of being used successfully since 1996 in humans in over 600 patients in the USA, Canada, Mexico, Holland, Belgium, Germany and China.” Danhof emphasized, Hammell reports, “that he goes to great lengths in his lab using spectral chromatography and other analytic methods to produce a safe, pure substance, and that he has tested every batch on himself or his colleague first before giving it to any patients. All aloe utilized was certified organic. . . . it took him over 20 years to perfect the process of producing Albarin, which is extracted through a freeze-drying process.”⁴⁵⁵

For years, favorable articles on using aloe for cancer (including leukemia) have appeared in medical journals. Some of them are, in order of publication (from 1976): “Tumor inhibitors. 114. Aloe emodin: antileukemic principle isolated from *Rhamnus frangula* L.” [not a typo],⁴⁵⁶ “Activation of a mouse macrophage cell line by acemannan: the major carbohydrate fraction from *Aloe vera* gel,”⁴⁵⁷ “The therapeutic potential of *Aloe Vera* in tumor-bearing rats,”⁴⁵⁸ and “Aloe-emodin is a new type of anticancer agent with selective activity against neuroectodermal tumors.”⁴⁵⁹

Despite the great promise of using polymannose extract (Albarin) for cancer, the US government ended the treatments. This shouldn’t surprise anyone, considering that the FDA works for Big Pharma and not consumers (see Sidebar, “Who Benefits From FDA ‘Protection?’”). Suppression of natural remedies happens a lot. Unfortunately, most people never hear about it because mainstream media rarely reports the truth. And if there is any truth to some reporting, it’s often distorted.

Pine Oil (Turpentine, Naturally Derived)

Turpentine isn't a drug or supplement, but an example of a natural remedy whose origins and uses have been hidden.

Turpentine—commonly known as the manufactured “rectified paint grade” chemical, which artists use to clean their brushes—wasn't always made from petroleum. In the Middle Ages in Europe, *terebint* referred to a species of tree that was used to produce turpentine. In fact, the tree was nicknamed the “turpentine tree.” Today, *terebinth* is the name for a small Mediterranean tree in the cashew family (*Pistacia terebinthus*), which is also used to produce turpentine. In the United States, turpentine as a healing agent is steam-distilled *without solvents or other additives* from the resins and volatile oils of live coniferous (cone-bearing) trees, especially pine. Like many aromatic plants from which essential oils are obtained—clove, oregano, eucalyptus, sandalwood, cinnamon, peppermint and cedar, to give just a few examples—turpentine contains a broad class of natural chemical compounds called *terpenes*. They are sometimes called *terebenes*, states one dictionary, from “tereb(inth)+ene,” and are used “medicinally.”⁴⁶⁰

Terpene-rich turpentine has been used medicinally for centuries. Dabbed on cotton wool and placed on a wound, it prevented infections. Cotton wool saturated in turpentine was placed on the chest for respiratory infections. The vapors, when inhaled in small amounts, cleared the lungs. For sprains, arthritis and gout, people massaged a mix of turpentine, cooking oil and perhaps camphor—not the poisonous, synthetic, petroleum-based stuff used today in moth balls, but natural camphor oil, made by distilling the bark and wood of the camphor tree. One of turpentine's most popular uses was for parasite elimination. Typically administered on sugar and taken internally, only a teaspoon or less was needed. Turpentine was also used to eliminate fungal infections, taken internally or used externally on toenails and fungus-ridden skin. It has also been used to eliminate head lice.

With even a brief review of history, chemistry, and the origins of words, we can see that the natural plant-based turpentine is very different from its modern namesake. Natural turpentine does have properties that allow it to function as a solvent. However, as with many essential oils, its safety depends on its concentration, how much is used, how it's applied, who is using it, and even how it's stored. Turpentine's fate is similar to that of other “folk” remedies (including camphor). Something is manufactured from synthetic materials, given the same name as the original, and then everything with that name is labeled “not for internal use.” And, as with any potentially caustic compound, turpentine must be treated with care. But suppressing its history and restricting its label doesn't give us the chance to use it wisely—if at all.

Who Benefits From FDA “Protection”?

Most people don't realize how politically influenced the FDA is. Several former FDA officials who now work as consultants for private industry explained this to me. The FDA receives a lot of “complaints” about various products it regulates. When I was first told this, I said, “Do you mean a lot of consumers complain to the FDA?” The answer is no. The FDA defines “complaints” as when a commercial company contacts the FDA and asks them to investigate the activities of a competitor. The purpose of these complaints is to cause problems for the competitor so that the “complaining” company can gain a tactical advantage in the marketplace. The FDA is happy to serve various pharmaceutical interests in this role due to the revolving door between the Agency and certain companies whose interests they protect.

The FDA claims to be a consumer protection agency. The truth is that industry uses the FDA to attack competitors. So when the FDA pretends to have the interests of consumers at heart, always look to who benefits from the FDA's actions. In most cases, it's giant drug companies, the blood banking industry, large food processors, etc. There is relatively little “consumer protection” provided to the American public by the FDA. The FDA aggressively protects the profit margins of industry (especially big drug companies), at the expense of the individual consumer.

Who do you think “complained” to the FDA about Joe Di Stefano and Dr. Mayer's intravenous aloe therapy? It turns out that no cancer patient or their families ever complained. . . . It turns out that more and more cancer patients were choosing this nontoxic alternative therapy instead of chemotherapy. So the oncologists in the area got together to “complain” to the FDA about Joe Di Stefano and Dr. Mayer selling an unapproved cancer drug (aloe extract).

Realizing that these conventional oncologists are part of the monolithic “cancer industry,” the FDA acted with lightning speed to shut down this competitive threat. After all, if the effects of this aloe extract became widely known, it could inhibit sales of highly profitable chemotherapy drugs.

The FDA has historically functioned to protect the profits of the politically well connected. Small companies who discover novel approaches to treat disease seldom survive the FDA's delays in approving paperwork or Gestapo-like raids as were instigated against Joe Di Stefano, et al.

—John C. Hammell

“FDA Attacks Alternative Clinics,

Cancer Patients' Lives Threatened,” April 2002

lifeextension.com/magazine/2002/4/report_clinic/page-02

neuropeptides (which hooked up with receptors on the immune cell surfaces). Our work . . . [pointed] irrefutably to the existence of a chemical mechanism through which the immune system could communicate not only with the endocrine system but with the nervous system and brain, as well. Previous work my colleagues and I had done demonstrated quite convincingly that the brain communicated with many other bodily systems. But the immune system had always been considered separate from the other systems. Now we had definite proof that this was not the case.⁴⁶²

The same theme of biological interconnectedness, expressed from a structural viewpoint, is discussed in *Energy Medicine: The Scientific Basis* by James Oschman.

“A few decades ago,” Oschman writes, “the living cell was visualized as a membrane-bound bag containing a solution of molecules”—which left the interior of the cell to be considered basically “empty.” However, contrary to what many of us learned in high school, a cell in the body “is *not* a bag of solution,” nor a circular outline surrounding empty space.

The more closely biologists and microscopists looked at cells, the more structures they found. With better preparation techniques, electron microscopists began to see within cells the material that the biochemists had been discarding. . . .

We now know that the cell is so filled with filaments and tubes and fibers and trabeculae—collectively called the cytoplasmic matrix or

	Holistic Medicine	Conventional Medicine
Philosophy	Based on the integration of allopathic (MD), osteopathic (DO), naturopathic (ND), energy, and ethno-medicine.	Based on allopathic medicine.
Primary Objective of Care	To promote optimal health and as a byproduct, to prevent and treat disease.	To cure or mitigate disease.
Primary Method of Care	Empower patients to heal themselves by addressing the causes of their disease and facilitating lifestyle changes through health promotion.	Focus on the elimination of physical symptoms.
Diagnosis	Evaluate the whole person through holistic medical history, holistic health score sheet, physical exam, lab data.	Evaluate the body with history, physical exam, lab data.
Primary Care Treatment Options	Love applied to body, mind, and spirit with diet, exercise, environmental measures, attitudinal and behavioral modifications, relationship and spiritual counseling, bioenergy enhancement.	Drugs and surgery.
Secondary Care Treatment Options	Botanical (herbal) medicine, homeopathy, acupuncture, manual medicine, biomolecular therapies, physical therapy, drugs, and surgery.	Diet, exercise, physical therapy, and stress management.
Weaknesses	Shortage of holistic physicians and training programs; time-intensive, requiring a commitment to a healing process, not a quick fix.	Ineffective in preventing and curing chronic disease; expensive.
Strengths	Empowers patients to take responsibility for their own health, and in so doing is cost-effective in treating both acute and chronic illness; therapeutic in preventing and treating chronic disease; and essential in creating optimal health.	Highly therapeutic in treating both acute and life-threatening illness and injuries.

—Robert S. Ivker, DO, ABIHM, FAAFP

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Also atahha.org/articles.asp?id=38

cytoskeleton—that there is little space left for a solution of randomly diffusing . . . molecules. *Virtually all the cell water is bound in particular ways to the cellular framework.* [emphasis added]⁴⁶³

In other words, scientists discovered that the cellular matrix (within the cell) and extracellular matrix (outside the cell) are both comprised of a certain type of delicate connective tissue that links the inside of each cell to the inside of every other cell *throughout the entire body.* (This discovery was unknown for a long time because the very process of preparing cells for viewing under a microscope, and the ways in which enzymes were extracted for examination, destroyed the living matrixes that are a vital part of the cellular structures. Chapter 2 discusses in depth what is possible to miss under a microscope.)

The discovery of this interconnected matrix has enormous ramifications. *It is our connective matrix that allows information to travel instantaneously in the body—* whether that information takes the form of hormones, electromagnetic radiation, or another type of energy. “The boundaries between the cell environment, the cell interior, and the genetic material are not as sharp or as impermeable as we once thought,” Oschman reports. He describes how appreciating this biology can help us understand various healing modalities.

As a hands-on [massage, “Touch For Health,” energy work, or related therapist], what you touch is not merely the skin [which also contains this matrix of tissue]—you contact a . . . living matrix [that] is a continuous and dynamic “supramolecular” webwork, extending into every nook and cranny of the body. . . . In essence, when you touch a human body, you are touching a continuously interconnected system, composed of virtually all of the molecules in the body linked together in an intricate webwork. *The living matrix has no fundamental unit or central aspect, no part that is primary or most basic. The properties of the whole net depend upon the integrated activities of all of the components. Effects on one part of the system can, and do, spread to others.* [emphasis added]⁴⁶⁴

Recognizing the body as a single, unified organism makes it much easier to comprehend why the *intentions* on the part of the healer or health care provider are so important. Intentions, Oschman explains, “give rise to specific patterns of electrical and magnetic activity in the nervous system of the therapist that can spread through their body and into the body of a patient.”⁴⁶⁵

Help the Body Fight Cancer On Its Own? What a Novel Idea!

The Food and Drug Administration on Thursday approved the first of an eagerly awaited new class of cancer drugs that unleashes the body’s immune system to fight tumors.

The drug, which Merck will sell under the name Keytruda, was approved for patients with advanced melanoma who have exhausted other therapies.

Cancer researchers have been almost giddy in the last couple of years about the potential of drugs like Keytruda, which seem to solve a century-old mystery of how cancerous cells manage to evade the body’s immune system.

The answer is that tumors activate brakes on the immune system, preventing it from attacking them. Keytruda is the first drug approved that inhibits the action of one of those brakes, a protein known as PD-1, or programmed death receptor 1. . . .

Keytruda was given accelerated approval by the F.D.A., allowing it to reach the market without the three typical phases of clinical trials needed to show [that] a drug can prolong lives. . . .

But the treatments will not be inexpensive. Merck said Thursday that the drug, known generically as pembrolizumab, would cost about \$12,500 a month, or about \$150,000 a year. . . .

Keytruda’s label warns that it can cause immune system reactions that can damage the lungs, liver, kidney and other organs. However, that warning is not inside a black box, the strongest level of caution.

—Andrew Pollack
The New York Times

“F.D.A. Allows First Use Of a Novel Cancer Drug”
September 5, 2014

This phenomenon on the biological level is mirrored in quantum physics. Subatomic particles in their own separate research laboratories have been shown to *communicate*—even across the Atlantic Ocean. In the ether, just like inside and outside biological cells, there exists a matrix consisting of particles that oscillate in response to each other. I discuss this in more detail in Chapter 6.

As it turns out, the oscillations of cells, along with their receptivity to electromagnetic fields, explain how Rife Therapy can restore normal cells as well as kill harmful microorganisms (see Chapters 2 and 4, and Appendix C). Oschman’s book is an excellent resource. He documents the different types of energy (frequencies) on the electromagnetic spectrum, what devices were used to register the various frequencies in the body, and how they can be applied to various methods of healing.

A HOLISTIC APPROACH: THE BASICS

Holistic health cannot be separated from holistic living. In natural medicine, one chooses an orientation and a direction as much as a particular treatment. When you sincerely adopt a holistic framework, your entire approach to life cannot help but shift.

Learning basic principles about the structure, function, and biochemistry of the body is empowering. Although we might (rightly) seek guidance and information from those more knowledgeable, ultimately we all (re)turn to ourselves to discover what is best for us. No one else lives in your body or has your exact experiences, senses, and perceptions.

Mainstream medicine—especially if it’s considered the sole healing modality or the only viable one—by definition shackles us to invasive procedures. Equally important, it fortifies the illusion that in order to heal, we must abandon our own abilities and leave our fate in the hands of the so-called experts. Those who relinquish responsibility for their health give up their power, their autonomy, and often their lives.

A 2004 Harris Poll survey showed that a measly “13% of Americans believe that pharmaceutical companies are ‘generally honest and trustworthy,’ putting the industry on a par with tobacco, oil, and managed care companies.”⁴⁶⁶ Twelve years later, a 2016 Gallup poll calculated that the pharmaceutical industry had a “net positive” rating of minus 23, with only the federal government ranking lower.⁴⁶⁷ Nevertheless, people still flock to mainstream doctors and hospitals. Even if a holistic therapy proves effective according to the most stringent requirements, people may still avoid it because they have been trained to denigrate everything that is not considered “standard” treatment. In addition, many people who express interest in holistic modalities may choose allopathic medicine when they become seriously ill—because Western medicine is what they were taught as children. It’s familiar, and people tend to be comforted by the familiar during a crisis. Plus, humans tend to adhere to habits. Thus we may choose the path of least resistance, even if we suspect that it may not be beneficial long term.

Sometimes, even those committed to holistic methods find it challenging to continue implementing them if their family and friends think they are being foolish. How many times have you been assaulted with the veiled intimidation tactic, “No one *else* does it that way”?

Unlimited publicity also plays a huge role in keeping some of us attached to Western medicine: there is simply

The most common way
people give up their power
is by thinking they don’t
have any.

—Alice Walker
writer and activist
(born 1944)

more public awareness of allopathic modalities than holistic ones. Also, there are many more allopathic doctors than holistic practitioners. All of these factors—combined with the refusal of insurance companies to reimburse for holistic remedies—can discourage all but the most determined souls from pursuing a holistic path.

In the scientific arena, a holistic modality might be evaluated as worthless or harmful not because it’s defective, but because the Western standard used to evaluate it is based on limited, linear methods that do not, and cannot, work on living, whole systems. “Simply because a treatment or therapy fails to fit the medical world’s concept of accountability,” writes Rife researcher and chiropractor James Bare, “does not mean that it has no merit and should be considered fraudulent. In the final analysis only the results of the treatment [and] the patient’s health . . . after treatment are of any importance.”⁴⁶⁸

Dr. Bare points out that despite the enormous amount of wealth it can access, the allopathic medical profession “has not been able to produce satisfactory results. Certainly no practitioner of natural health care would ever make press releases to brag about a 4% to 9% response (responded but still died from the disease) rate from their patients.”⁴⁶⁹

Moreover,

Patients willingly accept the huge physical risks associated with [allopathic] medical care. Yet that same patient and their family has no tolerance for any risk associated with Natural Therapeutics. A 1% or 2% death rate just from the use of anesthesia is completely acceptable, the death of 40,000 people a year from prescribed medications reactions, . . . [the death of] 40,000 people a year from surgery is acceptable, the death of several thousand people a year from improperly administered or incorrect medications is acceptable, the hospitalizing of over 8 million people in 1994 for drug-related mortality and morbidity is tolerated, but not one death or injury from Natural Therapeutics is tolerated.⁴⁷⁰

A Chinese medicine specialist points out the folly of regarding health in such narrow terms as distinct diseases or specific cures, because illness can indicate weakness or imbalance of the entire organism. Once we “seek to overcome those weaknesses,” he writes, we “will very likely end up doing what we would do to be healthy, even if we weren’t sick. The motivation here is not to overcome disease, but to help support life.”⁴⁷¹

How many of us live in an environment that fosters self-awareness, encourages the freedom to choose, and supports our uniqueness and creativity? If you have always trusted the government and medical establishment, and believed that they are truly interested in your well-being, some of the material in this chapter may be difficult to process or even feel overwhelming. “Why would people in such positions of power,” you might ask, “want to cause harm to innocent people?”

The answers to this emotionally charged question may not be easy to accept. I do know that part of the answer is about greed and power that allow corporate profits to escalate at the expense of people’s quality of life. But there are deeper psychological and even spiritual issues operating here, too. Some individuals enjoy having complete control over others. It gives them a feeling of power and importance. (This need for power, the desire to coerce and intimidate, indicates an inner emptiness and disconnection from the very source that helps promote good health. I address this in detail in Chapter 6.)

For those desiring a holistic life, what do we do? Is there any hope for increased funding of research for complementary modalities? There is always hope. Hope is a positive emotion that assists in healing. But we need to be realistic too. As long as the money is controlled by the medical-pharmaceutical cartel, funding will be limited for truly innovative natural therapies. The changes requested by attendees in 2004 at a conference, *Corporate and Political Influence on Science-based Policymaking*—from the disclosure of “financial interests of investigators and funding sources, to a registry of all clinical trials, to comparative rather than placebo controlled trials, to publication of negative data”⁴⁷²—are as pertinent today as they were then. Unfortunately, this indicates how much more needs to be accomplished.

Meanwhile, there’s plenty we can do for ourselves, and that is what this book is about. If you are curious about how holistic protocols can help you, don’t wait until you’re too weak or ill to do your research. Start now!

People who dismiss the corruption in the government and pharmaceutical industry as imaginary, exaggerated, or as the delusions of paranoid souls, are fooling themselves. They may also be leaving themselves vulnerable to a health crisis. After becoming sick, they will find that the medical options available to them do little to prolong their life or augment the quality of their remaining time. However, those who are open to genuine learning, to expanding beyond the conventional status quo mindset, have a much better chance of healing. They are the ones who ask questions, refuse to take “no” for an answer, and get excited about possibilities—including Rife Therapy.

When a “Patient” Becomes a “Client”

The allopathic medical model is intrinsically flawed. Many of the words and phrases used in that system are obviously crafted to obscure. But they’re also meant to enforce an undesirable hierarchy.

The word “patient” enforces this hierarchy in an insidious way. It transforms the client into a weak, obedient and dependent child—with no ability to discriminate and no right to question—while the doctor assumes the role of all-knowing parent or god, whose opinion must be followed even if it’s against the patient’s better judgment or common sense.

Objecting to the “doctor-patient” paradigm is more than linguistic nit-picking. Being a “patient” not only discourages you from helping yourself; it can actively hinder healing. In *Cancer As A Turning Point*, psychologist Lawrence LeShan writes about many cancer “patients” who did exactly what their doctors ordered them to do. Yet despite their eager compliance and strict adherence to protocol, they became weaker and sicker and lost the will to live. By contrast, those who either disobeyed their doctors, or became (from the doctors’ perspective) demanding, irritable and uncooperative, went into remission. Taking responsibility for their own condition, psychologically and emotionally, corresponded to the mobilization of their immune cells which allowed them to heal. The very act of questioning their doctors’ authority meant a positive difference in their attitudes, in their immune response, and how their energy flowed. In short, they took their lives into their own hands.

Understandably, it can be painful to acknowledge the cavalier disregard of human life that pervades industry and some of the highest levels of world governments. But the refusal to be asleep does not mean surrendering to despair. We can use our awareness to circumvent, dislodge, or change the mainstream (dominant) paradigm. There are many ways to participate in the growing global movement for positive transformation. The area of change this book focuses on is health, with an emphasis on holistic modalities and the technology invented by Royal Raymond Rife.

It should be noted that all of Rife’s experiments were conducted within the parameters of allopathic medicine, and that the doctors who supported him were allopathically trained. However, although it can be tempting to use any therapy in a mechanized (allopathic) manner, the chances of healing are infinitely better if you do not. Rife understood the larger, holistic picture—as you will see in Chapter 2.

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*Its name is Public Opinion. It is held in reverence.
It settles everything. Some think it is the voice of God. Loyalty to
petrified opinion never yet broke a chain or freed a human soul.*

—MARK TWAIN, AMERICAN WRITER, CRITIC AND HUMORIST (1835–1910)



Chapter 2 Outline

The History of Pleomorphism and the Inventions of Royal Raymond Rife

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decrease in hospital fatalities and an improvement in public health took place once physicians began washing their hands before performing surgery and dressing wounds. However, as Walene James explains, “when unclean or putrefying matter—conveyed by hands, dressings, or other means—contacts fresh wounds, it introduces morbid microzymas that alter the normal function of the inherent microzymas of the body.”⁷ This is not a mere repeat of Pasteur’s germ theory. The differences, though subtle, are important. According to Pasteur, all disease originates from outside attackers (germs) that penetrate an otherwise pristine and healthy system, with no internal systemic response other than the mobilization of immune cells to ward off the invaders. However, as Béchamp recognized, the body is never a passive observer of its circumstances: there is always a synergistic relationship between internal and external conditions.

Take the example of decreased illness after doctors began washing their hands in hospitals. When a doctor performs surgery with unwashed bloody hands that have previously touched someone else’s open wound, the new surgery subject becomes sick because *foreign material*, rather than a *pathogenic microbe* per se, has been introduced into the subject’s body. The phrase “foreign material” is key here. Human beings are not constructed to harbor life forms that are alien to their innate processes. James summarizes Béchamp’s findings:

There are functional differences in the microzymas of (1) the same organs and tissues of the same animal at different ages, (2) the blood and tissues of different species, and (3) the blood and tissues of different individuals of the same species. Because microzymas of different species are functionally different, each species has diseases peculiar to it. Certain diseases are not transmissible from one species to another and often not from one individual to another, even of the same species. Microzymas, then, are species and organ specific and even person and age specific.⁸

The specificity of microzymas to a given location explains how the introduction of foreign blood proteins (to use the above example) can make someone sick. “It is not the inoculated organisms which multiply,” Béchamp wrote, “but their presence and the liquid which saturates them *causes a change in the surrounding medium* [the person’s body] *which enables the normal microzymas to evolve in a diseased manner.*” [emphasis added]⁹

Put another way, the introduction of agents foreign to the body upsets the chemical balance of the inner terrain. These foreign agents can be chemical toxins, junk foods, or waste products from abnormal microzymas. Once the

body’s environment becomes unbalanced, the microzymas that regularly inhabit the system change in response to the altered chemistry. The foreign proteins do catalyze the change. However, *the malady itself is caused by the body’s own altered microzymas that have formed in response to the changed environment triggered by these outside agents.* At this point, the pathogenic microbes that are multiplying are not foreign substances, but the body’s own transmuted microzymas which—because they are reproducing and spewing their toxic waste into the system—perpetuate the cycle of ill health as long as the inner terrain is disturbed.

An infection catalyzed by external unsanitary conditions must be dealt with in the same manner as any other imbalance that involves the body’s own transmuted microzymas: detoxification from the poisons, paying attention to proper diet, getting more rest, and so on. We are not dealing with separate diseases here, only different manifestations of unbalanced conditions. Significantly, Béchamp recognized the function of fever as “the effort of the organism to rid itself of the products of an abnormal fermentation and disassimilation, while inducing a return of the diseased microzymas to the [original positive] physiological condition.”¹⁰ Pathogens cannot live beyond certain high temperatures, so the body finds a way to “cook” them by producing a fever.

Béchamp’s colleagues and the general public ridiculed his discoveries. James analyzes the barriers that prevented them from accepting what the scientist had proven in his laboratory. The germ theory, she writes,

fit neatly into the mechanistic theories of the universe that were popular in the nineteenth century. Second, it fit “human nature.” Man, apparently, ever ready to avoid responsibility and place causation outside himself, found an easy scapegoat in the bad little organisms that flew about and attacked him. After all, it wasn’t too long ago that evil spirits had been responsible for man’s ills. Third, it fit “commercial nature.” When we place causation outside ourselves, we create vast armies of attackers and defenders, assailants and protectors. In the case of disease causation, our protectors are such things as vaccines, drugs, X-rays, and the like, and their administrators, medical practitioners. The possibilities for commercial exploitation are endless. Is it any wonder that the “powers that be”—conservative, well-established scientific authorities—were behind Pasteur?¹¹

Mechanistic thinking, the avoiding of personal responsibility, and commercial exploitation are still the dominant paradigm today. It’s entrenched in what we might call “establishment medicine.”

BÉCHAMP'S SCIENTIFIC PROGENY

Had Béchamp been the only physician who observed these basic units of life that transform as the body changes, he might have passed into obscurity. But professionals from many different sectors of the scientific and medical communities subsequently agreed with his findings. What follows is only a small sample.

Rudolf Virchow

By the age of 25, 19th century Prussian Rudolf Virchow had become a doctor. The founder of pathology, he discovered and named many structures and tissues in the human body. Perceiving that the presence of harmful microbes was the effect—rather than the cause—of disease, he used the analogy that mosquitoes gravitate to stagnant water to feed, rather than being the cause of the stagnation itself.

Florence Nightingale

Florence Nightingale was a 19th century British mathematician and nurse who turned the devalued art of nursing into a respected profession and championed public sanitation because she understood that protecting the terrain was the biggest deterrent against pathogens. In 1860 she remarked:

Diseases are not individuals arranged in classes, like cats and dogs, but conditions growing out of one another. . . . I was brought up . . . to believe that smallpox . . . [began as] a first specimen in the world, which went on propagating itself, in a perpetual chain of descent. . . . Since then I have seen . . .

smallpox growing up in first specimens . . . where it could not by any possibility have been “caught.” . . . Wise and humane management of the patient is the best safeguard against infection—the greater part of nursing consists in preserving cleanliness. The specific disease doctrine is the grand refuge of weak, uncultured, unstable minds, such as now rule in the medical profession. *There are no specific diseases; there are specific disease conditions.*¹²

Guenther Enderlein

A little later, in Germany, scientist Guenther Enderlein (1872–1968) wrote about the different phases of the life cycles of microorganisms. He described how what he called *endobionts* climb the evolutionary ladder very quickly from their basic size of 0.01 microns and become larger, assuming more complex forms with the increased ability to perform complicated functions. In *Bakterien Cyclogenie (The Life Cycle of Bacteria)*, Enderlein pointed out that the highly varied forms these endobionts assume is a different phenomenon from the adaptive changes that occur when a bacterium becomes resistant to an antibiotic over several generations. He called pathogens *pleomorphic*, from the Greek meaning “many forms.” Echoing Béchamp, Enderlein emphasized that the numerous developmental stages of a microbe are not freaks of nature, but naturally occurring under certain conditions as part of the microbial life cycle. Pleomorphism, Enderlein wrote in 1950, “is easily affected . . . by increasing the local pH value.”¹³ (See Sidebar, “Antibiotics and Pathogen Behavior.”)

Enderlein had access to better microscopes than did Béchamp. Besides presenting specific data about how

Antibiotics and Pathogen Behavior

Many times after the administration of antibiotics, people either feel a need to take another cycle of the same drug—“because the medicine didn’t kill all the germs”—or they become sick with an apparently unrelated illness, to which they respond by taking a different drug. There are three reasons for the growing immunity of pathogens to antibiotics. One, if enough antibiotics are ingested over a period of time (either directly, or through the consumption of non-organic commercial meat, whose animals are routinely fed antibiotics), the pathogens will mutate into a more resistant form that is not necessarily part of their normal pleomorphic cycle. This scenario is now widely acknowledged as fact by the allopathic community, but they respond by creating even more deadly poisons to kill the strengthened pathogens instead of carefully limiting the use of antibiotics or stopping that use entirely.

Two, even if a pathogen is killed, another pathogen can be released from the first. For instance, viruses can live inside bacteria. So the host may still feel ill, even if the initial infection is eliminated.

The third reason that antibiotics don’t work is not readily understood by allopathic doctors and researchers. Even if a drug succeeds in eliminating a specific microorganism, that microorganism is one, narrow range of pathogen in an entire pleomorphic family. The drug has not eliminated other pleomorphic forms of the same pathogen, either higher up or lower down on the evolutionary chain. Unless the unhealthy terrain of the body is changed, the same symptoms may reappear in the future. Or, other forms in the same microbial family will cause new, different symptoms regarded as an unrelated, apparently different disease.

numerous classes of microorganisms function, he was able to describe their different shapes in some detail. He developed a comprehensive program of biological medications directed at the microbes' progressive life cycles to help the body eliminate the pathogenic forms and rebalance itself. Enderlein understood, however, that as long as the bodily terrain supports pathogens, they'll evolve into more toxic forms. That is why he also emphasized a healthy diet and the elimination of acidic wastes from the person's system as major components of good health.

Bruno Haefeli

Swiss biologist Bruno Haefeli worked with Enderlein. He reported that when acid accumulates in the body's cells due to poor diet and other stress, the cells begin to ferment. This provides a tasty snack for the malevolently transmuted microzymas and a wonderful opportunity for them to further ferment bodily tissue. Haefeli's name for the basic unit of microorganism was *protit*, but the concept was the same. All over the world, scientists were amassing the same data and responding with the same conclusions: Many kinds of generally benign microorganisms evolve into visually and functionally different, more harmful forms if conditions in the body support the change.

Wilhelm Reich

Around the time that Enderlein was working in Germany, and then later in Europe and the United States, his contemporary, natural scientist and psychiatrist Wilhelm Reich, followed a similar course (and geographic itinerary) with his own examination of microorganisms. In the 1930s, through special high-magnification microscopes that used dark field condenser technology and had a viewing capacity of up to 4500 times, Reich was able to examine the life processes of minuscule organisms. After extensive experiments, he discovered living, mutable microscopic entities that he called *bions*. "My observations [of these bions] and the resulting hypotheses," Reich freely acknowledged, "clashed severely with the 'germ theory.'"¹⁴ These bions appeared to be none other than Béchamp's microzymas and Haefeli's protits. Based on the fact that the blood of the cancer subjects he studied produced pathogens much more readily than did the blood of healthy people, Reich concluded that one's tendency to develop cancer was based on the inability of blood and tissue (the terrain) to resist putrefaction.

Significantly, Dr. Reich cautioned his critics against trying to duplicate his experiments without using identical measuring tools—a common mistake made by many scientists who try to replicate the work of other scientists. "It is not really possible" he wrote, "to verify the findings unless the same optics are used [original emphasis]."¹⁵ This is why Reich described in detail the manufacturers, models, and technology of the microscopes that he used in his lab to examine the living specimens.

Echoing Béchamp and foreshadowing some modern microscopists, Reich believed that what we call the cancer virus is actually a mutation of some of the body's own minute biological structures.

Edward Rosenow

Knowledge of a pathogen's pleomorphic cycle wasn't limited to native Europeans. In the United States, work was being done by Edward C. Rosenow, MD, who published over 450 medical papers and was an associate at the Mayo Clinic for decades. In a 1914 issue of *The Journal of Infectious Diseases*, Rosenow described taking a variety of bacterial strains from different diseased tissues and placing them in separate Petri dishes that all contained the same nutrient base. After a short period of time, when he examined the different dishes, he found no difference between them. All of the harmful microbes had transmuted into the same form! (Rosenow and his colleagues were

The aim of medicine is to prevent disease and prolong life. The ideal of medicine is to eliminate the need of a physician.

—William James Mayo, MD
American surgeon, who, with his brother Charles, ran the Mayo Clinic that had been founded by their father, William Worrall Mayo (1861–1939)

able to see this phenomenon almost 20 years later through Royal Rife's microscope. This will be discussed shortly.) When Rosenow later returned the altered microorganisms to their original diseased tissues, *their offspring assumed the original form and function of the parent microorganisms*. Rosenow's simple experiment has been successfully repeated by other scientists.

Nutritional biochemist A. Van Beveren writes:

Thus there is no "*streptococcus*" for the throat and "*pneumococcus*" for the lungs. They are the very same bacteria feeding on—and being modified by—the substance they are breaking down. This is pleomorphism and, while once ridiculed, [it] is now being reconsidered in light of improved microscopic techniques.¹⁶

In modern Germany, no fewer than eight textbooks on pleomorphism have been published.

ROYAL RAYMOND RIFE

A Renaissance Man

As we explore pleomorphism, a major repeating theme is the quality of the microscopes used by the researchers. Although the microscopes of Béchamp's time limited his ability to see the more intricate details of microzymas, he could certainly identify them by function and location. The scientists who followed him achieved much more comprehensive descriptions due to improved microscope technology. This brings us to Royal Raymond Rife.

A surviving copy of Royal Rife's birth certificate shows that he was born in Nebraska in 1888. However, Rife historian Charlene Boehm points out that this document was a *delayed* birth certificate, recorded in retrospect and based on notarized statements of people whose memories might be faulty. Various records show that the Rife family was actually living in southwest Iowa. Royal was raised by an aunt and uncle, as his mother died shortly after his birth and his father was unable to take care of him. In the early 1900s, Rife moved to San Diego and by 1912 he married a Chinese-American woman named Mamie Ah Quin.

Mamie, the third of twelve children, had been born into a wealthy and prominent family within the San Diego Chinese community. Her father was so well respected, in fact, that he was regarded as the unofficial mayor of Chinatown. Among his many accomplishments, the elder Ah Quin was a labor broker, recruiting newly arrived Chinese immigrants to build the railroad. He also had considerable bilingual talent and extensive legal knowledge, which made him a favorite translator in the courts. Documentation shows that Mamie's father was so eager to assimilate into American culture that he cut off his back braid—an offense punishable by death in China.

More is known about the Ah Quin men than the women. The men in the family were established entrepreneurs. For example, one of Mamie's brothers became part owner of a tourmaline mine that supplied jewels to the Dowager Empress in China. It has been reported that all of the Ah Quin children received musical instruction, so it's logical to assume that Mamie's upbringing focused on breeding, education, and adaptation to a new culture. All this, and her striking physical beauty, evidently attracted Rife to her. It was illegal for Caucasians to marry non-Caucasians at that time, so Rife and Mamie very likely got married across the border in Tijuana, Mexico—a reasonable guess, because when the youngest daughter Mabel married a Caucasian, documents show that she did this in Tijuana in the 1920s.

By 1920, Mamie and Royal had moved onto the estate of Amelia and Appleton Bridges, who hired Rife

as a chauffeur and car mechanic. The Bridges quickly recognized that Rife was not a typical employee. A gifted musician and artist, Rife had already educated himself in the fields of optics, electronics, biology, and chemistry. Additional education (whose documentation has not been substantiated) is believed to have included studies at Johns Hopkins University, training to perform eye surgery, and instruction with optical scientist Hans Luckel, who worked for German-based company Zeiss Optics and was in the New York plant when he presumably taught Rife. Popular literature says that Rife received an honorary Doctor of Parasitology degree from Heidelberg University, but the university has reported being unable to locate such a degree. Even without this honorary degree, though, Rife's intellect and accomplishments are impressive.

Throughout his life, Rife designed and built many medical research instruments. These included different types of spectrosopes (to split light into its constituent wavelengths), micromanipulators (tools that move, cut, or inject specimens under a microscope with great precision), a device to take stop-motion photomicrographs (pictures filmed through microscopes), and other optical tools. With one of his own photomicrograph inventions, he is thought to have made all of the pictures that appeared in the *Atlas of Parasites*, published by the University of Heidelberg in Germany. According to several reports, at some point the governments of the US and several foreign countries awarded Rife over a dozen medals for scientific work involving machine gun synchronization gears, variable pitch propellers, inclinometers (which measure the slope of an object), and high altitude barometric pressure scales.

Royal Rife reportedly had a period with the United States Navy during World War I when he traveled to Europe to examine foreign laboratories for the US government. Among other tributes, he was awarded a Research Fellowship in Bio-Chemistry by the Andean Anthropological Expedition Institute for Scientific Research on August 10, 1940. According to Rife researcher and engineer Dave Felt, Rife was offered an honorary Doctor of Science degree by the University of Southern California in 1936, but he did not accept it.

While still living on the Bridges estate, Rife conducted microscopic examinations on some samples of the metal used for ball bearings in a factory owned by Henry H. Timken, millionaire industrialist and the brother of Amelia Bridges. Rife discovered weaknesses in the grain structure of the metal and saved Timkin money. Most of Rife's efforts, though, were devoted to his laboratory, which was located above the garage on the Bridges estate and was financed by Bridges and other wealthy sponsors, including Timken. It was in this lab that Rife created some remarkable optical equipment.

The Universal Microscope

Rife, accustomed to working alone, became a public figure when he began building microscopes that were far superior in resolution and performance to anything thus far available. Although Rife was a contemporary of both Enderlein and Reich, he appeared to be unaware of the microscope technology and research of his European counterparts. We do know, however, that he was so dissatisfied with the quality of microscopes in the US that he vowed to create something better.

The most powerful and celebrated instrument, completed in 1933, was the 200-pound, 5,682-part Universal Microscope. Standing between two and three feet high, it had a magnification power of about 60,000 times, with a resolution of 31,000. Rife's microscope had some unique design features. "The New Microscopes" by Raymond E. Seidel and M. Elizabeth Winter, which described how the Universal Microscope worked, appeared in a 1944 *Journal of the Franklin Institute* and was reprinted in the *Annual Report of the Board of Directors of the Smithsonian Institution* for the period ending June 30, 1944. (Rife later remarked that despite a few errors, the article was basically correct.) Some highly technical details from the article are included to illustrate the level of expertise and legitimacy conferred on Rife by the medical community.

Dr. Royal Raymond Rife of San Diego, California . . . has built and worked with light microscopes which far surpass the theoretical limitations of the ordinary variety of instrument. . . . The entire optical system of lenses and prisms as well as the illuminating units are made of block-crystal quartz The illuminating unit used for examining the filterable forms of disease organisms contains fourteen lenses and prisms. . . .

When light comes into contact with a polarizing prism, it is divided or split into two beams, one of which is refracted to such an extent that it is reflected to the side of the prism without, of course, passing through the prism while the second ray, bent considerably less, is thus enabled to pass through the prism to illuminate the specimen. When the quartz prisms on the universal microscope, which may be rotated with vernier control through 360°, are rotated in opposite directions, they serve to bend the transmitted beams of light at variable angles of incidence while, at the same time, a spectrum is projected up into the axis

Where the telescope
ends, the microscope
begins. Which of the two
has the grander view?

—Victor Hugo
French poet and author
Les Misérables, 1862
(1802–1885)

of the microscope, or rather a small portion of a spectrum since only a part of a band of color is visible at any one time. However, it is possible to proceed in this way from one end of the spectrum to the other, going all the way from the infrared to the ultraviolet. *Now, when that portion of the spectrum is reached in which both the organism and the color band vibrate in exact accord, one with the other, a definite characteristic spectrum is emitted by the organism. . . .*

*A monochromatic beam of light, corresponding exactly to the frequency of the organism (for Dr. Rife has found that each disease organism responds to and has a definite and distinct wave length, a fact confirmed by British medical research workers) is then sent up through the specimen and the direct transmitted light, thus enabling the observer to view the organism stained in its true chemical color and revealing its own individual structure in a field which is brilliant with light. [emphasis added]*¹⁷

Rife's method of illuminating microscopic structures was extraordinary. Microorganisms seem invisible to us because the human eye can see only a very narrow band of light (color) on the electromagnetic spectrum—and not in the ultraviolet range that many microorganisms reflect. However, applying certain laws of optics, Rife translated the natural emanations of the microorganisms to the portion of the electromagnetic spectrum that humans can see. By rotating the microscope's quartz prisms in various configurations, Rife literally *tuned into the frequencies* of these tiny specimens, expressed as color on what, to us, is the visible light portion of the electromagnetic spectrum.

Put another way, as Rife approached the precise frequency of the microorganism, it began to resonate or oscillate in response to the narrow band of light that was being aimed at it. The microorganism became illuminated when the light that was shone on it matched its own inherent, energetic light wave signature. Typhoid presented itself as brilliant turquoise, the cancer virus as purplish-red, and so on. (See Sidebar, "Viewing the Carcinoma Virus.")

Even when magnifying specimens only 31,000 times (its lowest range), the Universal Microscope surpassed the best light microscopes that used conventional lighting (such as the popular Zeiss dark field, oil immersion scope). It also easily surpassed the electron microscope,

which was still being developed then. Even if the electron microscope did have better resolution during Rife's time, it still would not have been useful to the scientist. An electron microscope can enlarge an image up to one million times, but it does this by bombarding the slide with electrons in a vacuum—conditions under which no living organism can survive. If a pathogen has to be killed in order to be observed, vital information is lost, such as how it functions in its natural state, what encourages its growth, and what can harm or destroy it. World Research Foundation founder Steve Ross once pointed out during an interview that the practice of killing specimens before viewing them is “like picking up a dead dog in the street and trying to figure out what the personality is. . . . You're not looking at the same organism.”¹⁸

Rife's colleague, Dr. Rosenow, was impressed with the microscope's capabilities. “Examination under the Rife microscope of specimens containing objects visible with the ordinary microscope, leaves no doubt of the accurate visualization of objects or particulate matter by direct observation at the extremely high magnification obtained with this instrument.”¹⁹

With such high resolution, not only did the Universal Microscope allow tiny microorganisms to be viewed, it also proved that harmful microbes were pleomorphic. This was discussed in “The New Microscopes,” in which the authors named many microorganisms that became visible through Rife's optical instrument.

The human body itself is chemical in nature, being comprised of many chemical elements which provide the media upon which the wealth of bacteria normally present in the human system feed. These bacteria are able to reproduce. They, too, are composed of chemicals. *Therefore, if the media upon which they feed, in this instance the chemicals or some portion of the chemicals of the human body, become changed from the normal, it stands to reason that these same bacteria, or at least certain numbers of them, will also undergo a change chemically since they are now feeding upon media which are not normal to them,* perhaps being supplied with too much or too little of what they need to maintain a normal existence. They change, passing usually through several stages of growth, emerging finally as some entirely new entity—as different morphologically as are the caterpillar and the butterfly. . . . The majority of the viruses have been definitely revealed as living organisms, foreign organisms it is true, but which once were normal inhabitants of the human body. [emphasis added]²⁰

Rife himself understood the importance of pleomorphism. “It is not the bacteria themselves that produce the disease,” he emphasized, adding that he and his colleagues “believe it is the chemical constituents of these micro-organisms enacting upon the unbalanced cell metabolism of the human body that in actuality produce the disease. We also believe,” he acknowledged, “if the metabolism of the human body is perfectly balanced or poised, it is susceptible to no disease.”²¹

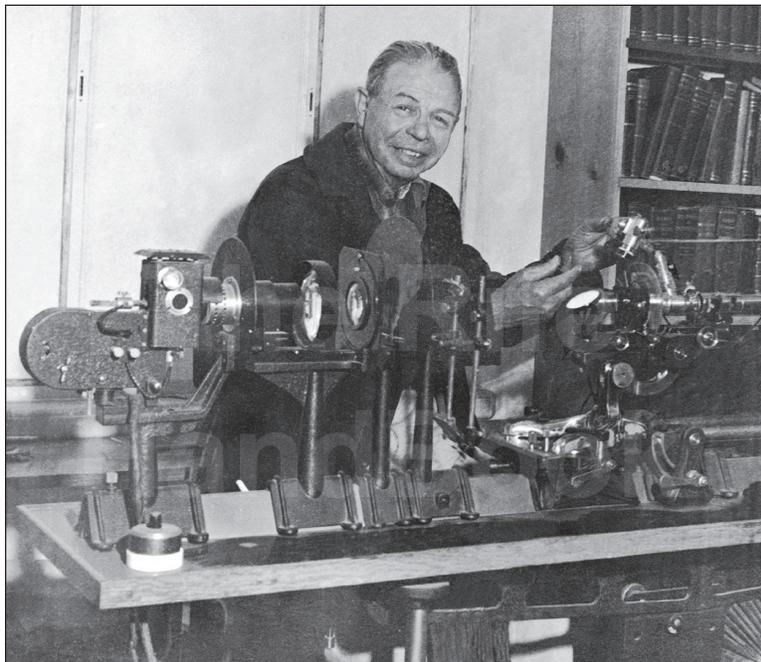
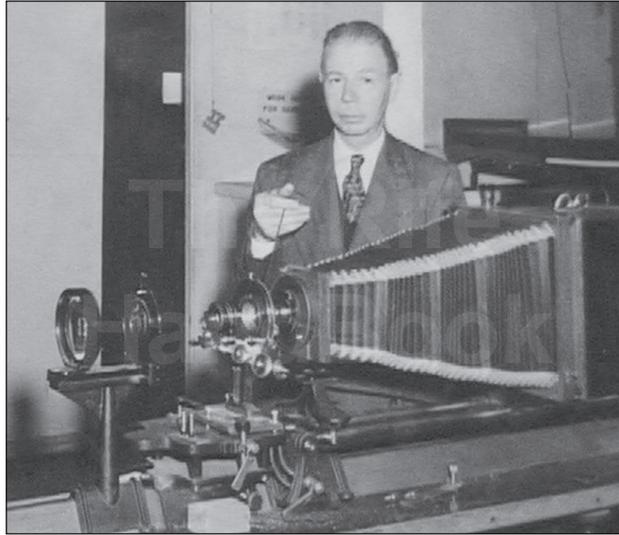
Fortunately for Rife, there were a number of highly respected doctors and researchers in the medical and scientific communities who supported his work. Before Rife's third Universal microscope was completed, he met bacteriologist Arthur I. Kendall. Kendall held many important positions during his lifetime, among them Dean of Northwestern Medical School, instructor at Harvard University Medical School, Director of the Hygienic Laboratory (the forerunner of the present National Institute of Health), and chair of the Department of Bacteriology at Northwestern University in Illinois. Like Dr. Rosenow before him, Dr. Kendall had independently investigated the pleomorphic character of pathogenic microbes. In a nutrient medium he developed (called the “K-medium”), he placed bacterial cultures that transmuted into another form. Once the delighted Kendall was able to view the transmuted bacteria through Rife's microscope and further confirm his findings, the two men began working together closely. Thereafter, Rife conducted many experiments with both Kendall and Rosenow, who both made public their position on pleomorphism. In the December 1931 issue of the journal of the California Medical Association, *California and Western Medicine*, Rife and Kendall published a report of some of their experiments on filterable forms of *Bacillus typhus*. Rife wrote:

We have classified the entire category of pathogenic bacteria into 10 individual groups. Any organism within its group can be readily

Viewing the Carcinoma Virus

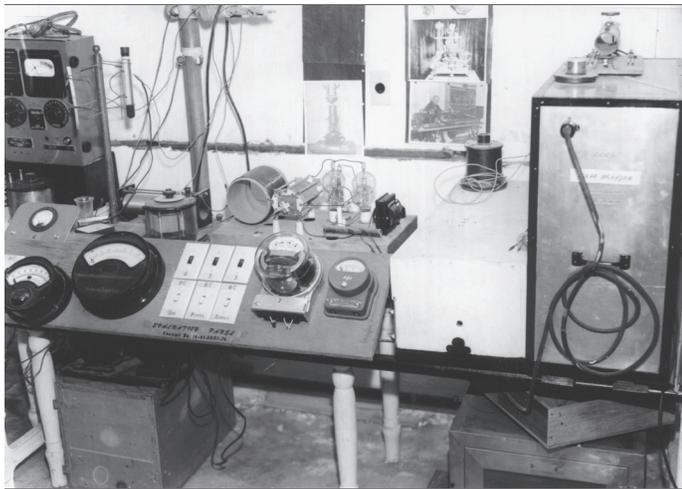
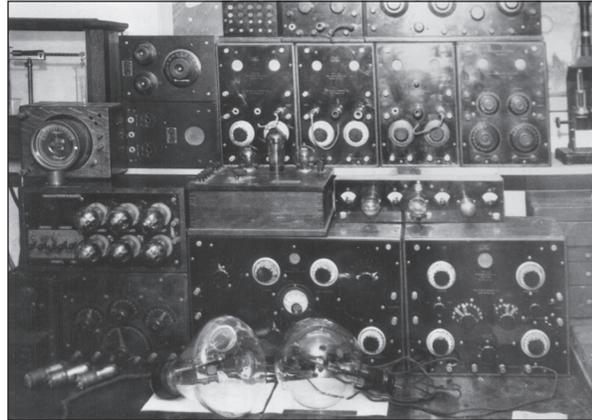
Although Rife was usually successful in viewing microorganisms, initially he had trouble detecting the carcinoma virus. One day, he serendipitously placed a tube of cancer culture inside an electrified glass ring filled with argon gas and left it there for about 24 hours. When he later examined the culture through his microscope, he noticed that it had acquired a purplish-red color that now made it visible. Remarkably, the specimen was still living. Thus Rife discovered a method of “staining” the cancer virus with certain frequencies on the electromagnetic spectrum, and without killing it.

Cameras were essential tools for Rife's work. He used both still and motion picture cameras to capture the images of specimens seen through his microscopes.



A collection of Kennedy and other brands of radio receivers that Rife experimented with at different times. Note the gas-filled transparent tube in front, used to convey the frequencies.

Courtesy of Rife Research Group of Canada

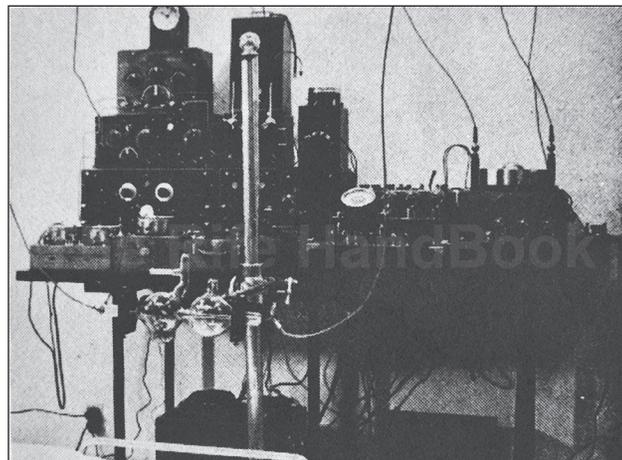


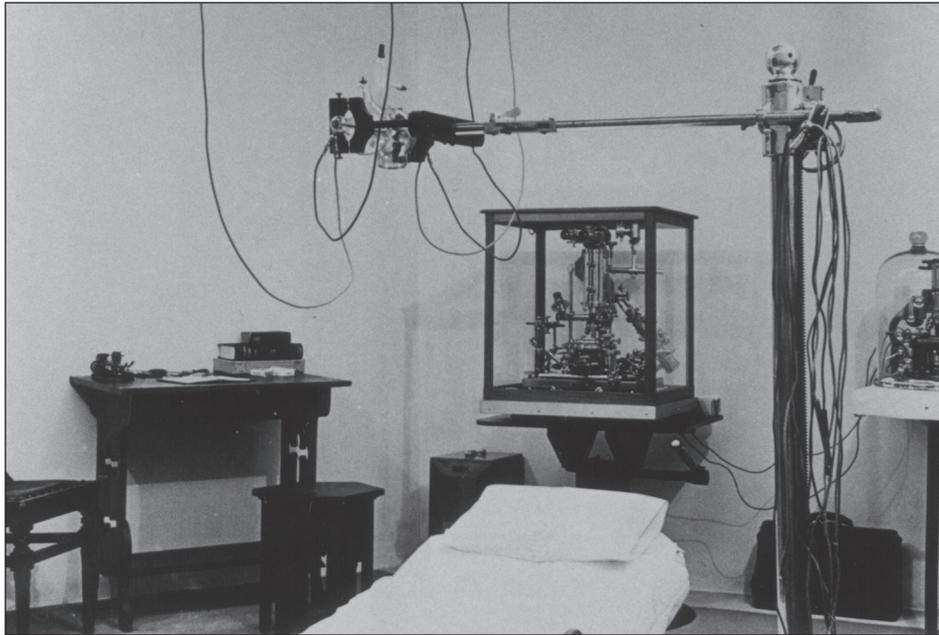
Unidentifiable equipment.

Courtesy of Rife Research Group of Canada

Rife Ray No. 3, 1934, used in a clinical trial the same year.

Courtesy of Jeff Garff





Treatment room.

Courtesy of Rife Research Group of Canada



Rife Ray No. 4, 1935.

Courtesy of Jeff Garff

RIFE RESEARCH LABORATORY 81

Bacillus X (Cancer) Carcinoma
(Rife) 11-20-35

Filterable Virus: Passes W: K Medium

motile, small oval granule
highly plastic
insoluble only with mono chromatic light
angle of refraction 123/10
color by chemical refraction Purple-red
length - $\frac{1}{5}\mu$: breadth $\frac{1}{20}\mu$

Polarity
- anode X
- cathode

leak rate in milliamperes 175 D.C.
Influence of X rays none
" " Ultra Violet ray slows motility
" " Infra Red - none

Thermal death point 42C. 24 hrs.
filament voltage 10
" amperage 86
plate voltage 928
Cycles per second 14,780,000
Wave length of super regeneration of audion tube 17 $\frac{1}{10}$ Met.

A page from Rife's lab notes for the *Bacillus X*, or Carcinoma (cancer) virus.

WEATHER FORECAST
 THE ASSOCIATED PRESS THE INTERNATIONAL NEWS
EVENING TRIBUNE FINAL HOME
 ESTABLISHED 1910
 SAN DIEGO, CALIFORNIA, FRIDAY, MAY 6, 1938
 SECTION A FIVE CENTS 75c PER MONTH

'Klan' Threat To Filipino Guardsmen
 MIAMI, Fla., May 6 (A.P.)—Conf. J. H. Abel, of the United States coast guard, demanded police protection today for two Filipino guardsmen threatened purportedly by the Ku Klux Klan in vicinity of their marriage to white women.

Deal Is Raked By Hoover as 'Dictatorship'
 OKLAHOMA CITY, May 6 (A.P.)—President Hoover today said he would not support a proposed deal between the Ku Klux Klan and the federal government to allow the Klan to operate in the United States.

Boost in Cost Of S. D. Relief
 SAN DIEGO (Special)—The cost of relief for the unemployed in San Diego today was reported to have increased by 10 percent over the cost of relief for the unemployed in San Diego last week.

'WONT RUN IN '40,' ROOSEVELT QUOTED IN PARIS PAPER
 PARIS, May 6 (A.P.)—The Paris paper, L'Express, today quoted Roosevelt as saying he would not run for president in 1940.

House Forces Vote on Wage-Hour Bill
 WASHINGTON, May 6 (A.P.)—The House today voted 308-107 to pass the wage-hour bill.

DREAD DISEASE GERMS DESTROYED BY RAYS, CLAIM OF S. D. SCIENTIST
 Discovery that disease organisms, including one causing dread cancer, can be killed by bombarding them with radio waves trained in a particular length for each kind of organism, was claimed today by a San Diego scientist, Royal Raymond Rife, Ph. D. He added that he had isolated the cancer organism but is not positive yet that it is the direct cause of the disease.

Cancer Blow Seen After 18-Year Toil by Rife
 The discovery promised fulfillment of man's age-old hope for a specific destroyer of all his infectious diseases, although Rife admitted any claim that he had established this yet. He announced his work in the conservative manner of scientists, but his reports indicated the great promise in their testing of successful bombardments of thousands of cultures of organisms, including almost all kinds known to afflict mankind.

Deal Is Raked By Hoover as 'Dictatorship'
 OKLAHOMA CITY, May 6 (A.P.)—President Hoover today said he would not support a proposed deal between the Ku Klux Klan and the federal government to allow the Klan to operate in the United States.

Wagon Driver Killed
 A wagon driver was killed today in a collision with a truck on a highway near San Diego.

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San Diego Evening Tribune article by Newell Jones on the Rife and Hoyland Beam Rays Corp. instrument, May 6, 1938.

THE ASSOCIATED PRESS THE INTERNATIONAL NEWS
EVENING TRIBUNE
 ESTABLISHED 1910
 SAN DIEGO, CALIFORNIA, WEDNESDAY, MAY 11, 1938
 SECTION A

Rife Bares Startling New Conceptions Of Disease Germs and Their Activity

By NEWELL JONES

Three new and revolutionary conceptions of disease germs and their activities were disclosed today by Royal Raymond Rife, San Diego scientist, as a climax to years of exploration by him in the mysterious microscopic worlds of these little slayers of men. He:

- 1—Expanded his previous brief reports of isolation of hitherto unseen, filter-passing viruses to tell of discovery of many kinds of them and to picture them as living entities, rather than mere chemicals, and as players of more extensive and important roles in disease than realized before.
- 2—Reported discovery that organisms of disease have more forms of their respective kinds than known previously.
- 3—Announced the startling finding that the organisms radically alter their fundamental biologic characteristics when "fed" upon different substances, actually changing from one thing to another in the case of one type.

Rife's announcements followed his revelation last week of discovery that tuned radio waves will kill organisms of disease, and of improvement of his high-power microscopes, both reported exclusively. (Continued on Next Page, Col. 3)

San Diego Evening Tribune article by Newell Jones on the Rife and Hoyland Beam Rays Corp. instrument, May 11, 1938.

Both photos courtesy of Jeff Garff

As with all electronic equipment, Rife's frequency devices were potentially vulnerable to being affected by unwanted stray electromagnetic interference. The interference could come from motors, generators, cables carrying high levels of alternating or direct current, transformers, and even the Earth's own magnetic field. For a unit such as the Rife Ray—which required precision calibration and relied on exact frequencies to disable pathogens—even a little bit of interference could make a huge difference in whether or not the device was effective. Therefore, it was curious that with at least one of the Rife Ray models, the components were not adequately protected from stray magnetic fields.

This unwelcome variation in frequency would not have occurred had the equipment been shielded—a problem with just about any electronic device that was widely recognized even during Rife's era. *Shielding* is the use of various materials to surround and protect components so they can operate properly without interference. Any material that's conductive can be used to shield sensitive components. The material diverts the interference field so the field travels *around* the device instead of *through* it. The shielding can be used to either *keep out* the field, or *confine* the field so it doesn't disturb other equipment that's in the same room, next door, or miles away. Shielding materials include wire mesh, metal enclosures, conductive paint, foil tape, adhesive compounds, and mu-metal. Mu, made from nickel, iron, copper and molybdenum, very effectively protects against static fields and low frequency magnetic fields. Mu-metal was available in Rife's time, but it was (and still is) quite expensive. Today, to avoid interference, it's customary to shield sensitive equipment—everything from high definition cathode ray tubes to amplifier circuits to wiring. This shielding, which is internal, usually consists of small enclosures made of metal or some other material, placed around selected components inside the equipment. Occasionally, for further protection, external shielding that surrounds an entire device is used. However, this is employed mainly by electronics professionals.

I discuss shielding in some detail because it's relevant to modern equipment. Most of the shielding problems in contemporary machines involve interference with external electronics. Any good frequency device costing thousands of dollars should be shielded. An unshielded unit running in the same room as a working computer or television will create a wavy picture, static, or both. Interference can also occur during rifting, when the unit's power output

**Don't confound static
electricity with ecstatic
eccentricity. One will leave
your hair up, the other
will live up in the air!**

—Ana Claudia Antunes
The Tao of Physical and Spiritual,
2008

augments a signal from an amplifier—resulting in an annoying hum that many people report hearing in their television set or their phone line. Moving the frequency instrument away from the other electronics usually eliminates the hum. If sharing the same wall sockets or circuits causes interference, the problem can be corrected by using different fuses or circuit breakers.

The frequency capability of Rife's equipment spanned from what engineers call the *audio range* on the electromagnetic spectrum (measured in hertz, abbreviated Hz) to the *ultrasonic* and *broadcast* ranges (measured in megahertz, abbreviated MHz). The term "audio range" can be confusing. It simply refers to a frequency that *could* be heard *if* the electromagnetic waves were converted into sound waves. MHz frequencies (much higher, in the millions of Hz), if convertible to sound waves, would be beyond the range of human hearing; so they aren't considered to be in the "audio" range.

In some of his units, Rife used a radio frequency (RF) *carrier wave*, which was always in the MHz range. The RF signal served a dual purpose. The high-frequency signal was necessary to light the tube. But it also served as a foundation upon which other frequencies could ride it, like a ship on the ocean (the RF) carrying passengers (frequencies). Using a carrier wave with a frequency produces *heterodyning*—the combining and merging of the two, which in turn creates more new frequencies. The new frequencies result from both the sum of the originals and the differences between the originals. With Rife's units, it was sometimes impossible to determine which frequency was doing what, as all the signals sent to the ray tube were important. It was very likely the unique combination of frequencies, the wave shape, and the energy fields that did the healing.

The shape of the RF signal that was sent through the ray tube was a *sine wave*—which is symmetrical and has a smooth rounded shape. (*Square waves*, commonly used in modern equipment, could not be produced by the older units.) The ray tube distorted the waveform, which produced many *harmonics*—higher frequencies, weaker in power, created by a main frequency under certain conditions. Some of these additional, higher-frequency harmonics were even higher than what the receiver alone was capable of outputting. This helped make Rife's technology even more successful. (See Chapter 4 for more information about wave shapes and their effects.)

The ray tube was a partially directional *transmitter*. Because its power was concentrated into a small area, the

Scalar Wave Properties

Electromagnetic (EM) waves and scalar waves are different. An EM field can be separated into distinct electrical and magnetic fields that are *transverse*, or transmit at right angles from their point of origin. Scalar waves—also known as *longitudinal waves*—are parallel to their point of origin. EM waves have a beginning, middle and end, with correspondingly uneven amounts of strength. Scalar waves are *standing*, with uniform amounts of strength. One common catalyst for the release of scalar waves is their *coupling*, or engaging, with an EM field. EM fields can be generated not only by electronic devices, but also by humans. Research by Dr. Valerie Hunt focuses on human healers who emit not only EM waves, but also scalar waves.

“The concept of scalar waves,” writes British physicist Noel Huntley, “is beyond the scope of conventional science, but not quantum physics. The data on scalar waves from Maxwell’s brilliant, original electromagnetic equations was removed prior to publication.”²⁷ Scalar waves are difficult to detect using standard equipment, as they do not register on an oscilloscope. Remarkably, though, conventionally trained engineers cite their incomplete education, inadequate measuring devices, and limited experience as proof that scalar waves do not exist. This is similar to some professionals who looked through Royal Rife’s microscope and did not see various pleomorphic strains of the same microorganism because of *their* preconceptions.

Certain plasma tube units are uniquely suited to emitting scalar waves. The noble gas inside the tube is excited, the electrons of atoms are hurled into a higher orbit, and the chaotic-wave gas turns into higher-energy, coherent-wave plasma (which moves in a spiral), known as the “fourth state of matter.” Once the catalyst that caused this higher-energy state is withdrawn, the plasma collapses back into gas. In order for this collapse to occur, the plasma must release energy, one form of which consists of photons of light. The rapid move back and forth between states (gas to plasma to gas to plasma, etc.) is probably what initiates the production of scalar waves. Such waves are then received directly by certain cell structures that process and power metabolic functions. We can perceive scalar waves due to their effects: the restoration of biological tissue, and the proper function of living organisms.

practitioner placed the tube either within a few inches of the subject’s body or, in some cases, directly on the person. Dr. Robert P. Stafford, a colleague of Rife, reported that when he treated people who had cancer, he focused on six square inches at a time, slowly moving the tube so that eventually it covered the entire affected area of the body.

The Rife Ray’s ability to eliminate pathogens was based on Rife’s finding each organism’s MOR, or Mortal Oscillatory Rate, and dialing those frequencies into the machine. The May 6, 1938 edition of the *San Diego Evening Tribune* carried a now-famous article by Newell Jones explaining how the microorganisms died, through a process called *entrainment*.

Each organism requires a different wavelength. . . . [An analogy is] something similar to . . . when one musical tuning fork is set in vibration by sound waves emanating from another fork struck nearby. Another example is the vibration which almost everyone has noticed a pipe-organ note causes in windows or furniture of the room where the instrument is being played. Again, a similar thing happens when a radio cabinet rattles from sounds passing from its speakers.

It is commonly known that the sound from the first object causes the second to vibrate in harmony. . . . The thing where the original sound-

producing vibration occurs has the same pitch, wave length, [and] frequency . . . as the one giving the sympathetic response. . . . [One object may] have a frequency which only is a part of a complex frequency possessed by the other; that is, one may be a simpler tone which is one element in a complex tone characterizing the other.²⁸

The destruction of a microorganism has also been compared to the cliché of a soprano singing a pure, focused tone that shatters a glass whose resonant frequency matches that particular tone. While this glass-shattering phenomenon is real, the analogy of sound to describe how Rife’s equipment worked is technically incorrect. A sound wave is a mechanical motion. Rife’s units could affect microorganisms through many inches of concrete, which can absorb mechanical motion (and thus prevent it from being transferred elsewhere). Therefore, something else was responsible for the destruction of pathogens: *electroporation*, the abnormal permeability of either a microbial cell wall or a human or animal cell membrane. The permeability is most pronounced during an energy transfer, or *when there’s a match in wavelength* (frequency). The Rife Ray—through *resonance*, or the matching of wavelengths—transferred energy to a microbe’s cell wall. This increase in energy disturbed the electrical charge of the pathogen, causing a *change in shape and pattern*,

which compromised its structural integrity. Due to this electroporation, a pathogen would begin to destabilize.

Today, we understand one more probable manifestation of Rife's technology: *scalar waves*. Scalar waves are not part of the electromagnetic (EM) spectrum. A few innovative researchers have proposed that some modern plasma units emit scalar waves (as Royal Rife's instrument apparently did as well)—and that these scalar waves help regenerate the body as well as possibly devitalize pathogens. See Sidebar, page 215, "Scalar Wave Properties."

When Rife finally did find the MOR, explains chiropractor James Bare (who holds the patent on the Bare-Rife frequency machine), the microorganism "would lose its color and become clear as it absorbed the resonant energy [of the frequency] and changed or died."²⁹ Sometimes the pathogens shattered. Other times, they simply weakened and lost their motility (the ability to move spontaneously and actively). Jones explained that some pathogens "writhe as if in agony and finally gather together in deathly moving clusters."³⁰ "Some types," Rife himself stated, "will explode or disintegrate and some will gather together like log jams or agglutinate."³¹

All of Rife's frequencies were specific to the organism. They had to be accurate. The inventor stated, "One tenth of one meter [or a smaller denomination] off and you have nothing. . . . [The frequency must] be absolutely correct for that individual organism."³² (When Rife mentioned meters, he was referring to the *length of the wave* that corresponded to the actual frequency in Hz.)

How did Royal Rife determine the MOR of a pathogen? First he examined thousands of specimens and tissue cultures from laboratory animals and humans through the Universal Microscope. As usual, the microorganism was illuminated in its own colored light while the surrounding field remained white. Then Rife tested the samples to ensure that a specific disease correlated to a specific pathogen, using the allopathic medical model of Koch's cause-of-disease hypothesis. Finally, Rife would turn the dials of the Rife Ray ever so slightly, switch on the power, and then examine the slide under the microscope to see if this time he had found the correct frequency.

The entire process was tedious, repetitious, and solitary. However, Rife was used to working this way. He had used the same painstaking observational skills years earlier when he tuned the microscope, bathing pathogens in their own light so he could view them. His colleagues described him as a man of immense patience. "I've seen Roy sit in that doggone seat without moving, watching the changes in the frequency, watching when the time would come when the virus in the slide would be destroyed," said Benjamin Cullen, who watched the scientist regularly.

Twenty-four hours was nothing for him. Forty-eight hours. He had done it many times. Sit there without moving. He wouldn't touch anything except a little water. His nerves were just like cold steel. He never moved. His hands never quivered.

Of course he would train beforehand and go through a very careful workout afterward to build himself up again. But that is what I would call one of the most magnificent sights of human control and endurance I'd ever seen.³³

As far as we know, Rife's technology did not harm the human or animal host. The oscillatory rates of humans and small mammals are much different from, and more complex than, the MORs of microscopic viruses, bacteria, and fungi. Rife was confident about the safety of his equipment, he stated on numerous occasions.

With the power that is in these [ray tubes], there is absolutely no harm. . . . I had my [ray] tube right here . . . about 11 or 12 inches away from the slide in the microscope. And here I was with . . . that tube going . . . year after year . . . and it never harmed me any.³⁴

And:

I stood in front of that thing [his ray tube] for 30 years finding these different frequencies that devitalize these different bacteria. And that thing was shooting on me right here [his chest], but it is absolutely harmless to normal tissue.³⁵

The non-invasive nature of this new method, plus the promise that it held, began generating great excitement in the medical community. Now they needed more.

Case Studies

By the end of 1932, Rife was destroying the typhus bacteria and numerous viruses (including the ones for cancer) that were grown in cultures and inoculated into lab animals. His equipment was able to destroy these pathogens whether they were in Petri dishes or in living animals. Then, as now, standard scientific protocol for testing drugs and other medical treatments involved using two groups of infected animals: the group that received treatment, and the control group that did not. If significantly more animals in the treated group lived than did those in the control group, this presumably indicated that the treatment was effective.

To prove the effectiveness of the Rife Ray, Rife was obliged to follow standard medical procedure. He injected

his rats with the disease organisms. Then he withheld treatment from the control group (all of whom died), and gave treatments to the other rats (all of whom lived). Within the confines of scientific protocol, Rife was kind to the animals. To spare them pain (which also made them easier to handle), he administered anesthesia before giving them injections or doing surgery.

Rife described the scientific protocol in detail:

On one series of cancer tests, I inoculated the virus which I had isolated and filtered from an ulcerated breast mass into an albino rat. The tumor was allowed to grow and then I surgically removed the tumor and again isolated and filtered the virus from a portion of the ground up tumor and inoculated the next rat and repeated this procedure 411 times to prove that this virus was the causative agent of cancer.³⁶

Eventually, Rife had to prove that pathogens could be destroyed in humans without harming the host. To secure human subjects for his case studies, he sought the assistance of Dr. Milbank Johnson.

Johnson was the physician who had hosted the historic dinner honoring Kendall and Rife after the Universal Microscope was completed. He was enormously wealthy, with assets reportedly worth around \$15 million. After receiving a Doctorate from Northwestern Medical School in 1893, Johnson was awarded a Doctor of Law degree in 1916 from the University of Southern California, and another degree in 1920 from Northwestern University. The medically-related posts he held during his illustrious career included Professor of Physiology and Clinical Medicine at the University of Southern California; Chairman of the Claims Committee of the Pacific Mutual Life Insurance Company in 1920 and Claims Director of that company for most of the years from 1906 until 1936 (his retirement); member of the board of directors at California's Pasadena General Hospital; Chief Surgeon of the Southern California Edison company; and member of the Los Angeles Board of Health.

Johnson's humanitarian nature and his determination to eliminate illness are amply demonstrated in his surviving letters. The fact that his first wife died in 1920 of cancer, along with a *Streptococcus* infection following radiation treatments, undoubtedly made him even more interested in Rife's clinics. It was Dr. Johnson who convinced Timken to help finance Rife's new laboratory, which was built around 1936. Generally, Johnson remained loyal

and supportive to Rife for as long as the two men were in contact. Pivotal to all phases of Rife's career, Johnson advised and guided Rife. He generated publicity. And he helped Rife with projects.

Johnson himself initiated most (if not all) of Rife's clinical studies because Rife disliked the spotlight and preferred to focus on his laboratory research. To work with Rife, the doctor assembled some of the most prominent professionals with outstanding credentials (most of them had MD, PhD, or DDS degrees) from Canada, England, and the United States. These professionals did independent studies, performed laboratory research, and used the Rife Ray with paying clients as well. To test Rife's equipment on people with cancer and other illnesses, three clinics were set up, all of them funded by Johnson.

The first clinic, established in 1934, was at the La Jolla home of Ellen Scripps under the auspices of a University of Southern California "Special Medical Research Committee." Rife referred to this committee later on a legal document, and this particular clinic is often cited as a success by proponents of the technology. However, Rife researcher Dave Felt, based on a surviving letter by Dr. Johnson, believes that this committee was unofficial and the university's name was used "in order to have some liability

coverage for Scripps because they were using her property. Johnson probably asked Dr. Rufus B. von KleinSmid, president of USC, if he could form the clinic under the umbrella of the university, and Von KleinSmid said yes."³⁷

Most of Milbank Johnson's letters have been recovered. However, those dated between June 1934 and early 1935 are missing, so we can only guess at what actually occurred. From Dr. Johnson's surviving letters, we learn that he had no help and no assistants, and that Rife's involvement in the 1934 clinic was minimal. In fact, Johnson had to plead with Rife—in many ways the quintessential scientist who secludes himself in his lab—to get involved with the clinic. We know that between a dozen and 16 people were treated, most of them for cancer and a few for tuberculosis.

Of those in the 1934 study who were treated for cancer, some apparently did go into remission, because tissue and fluid samples sent to pathologist Alvin Foord at the Pasadena General Hospital were stated to be free of any traces of cancer. However, Johnson did report later that one man returned to him in the early part of 1935. The cancer in his cheek had not improved, so Johnson sent him to a hospital to have the corresponding eye, along with the malignant tissue behind the eye, surgically removed.

Those who say it
cannot be done
should not get
in the way of the
person doing it.

—Chinese proverb

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Until a man duplicates a blade of grass, nature can laugh at his so-called scientific knowledge. Remedies from chemicals will never stand in favorable comparison with the products of nature, the living cell of a plant, the final result of the rays of the sun, the mother of all life.

—THOMAS ALVA EDISON, AMERICAN INVENTOR (1847–1931)



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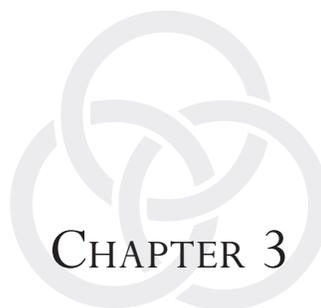
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CHAPTER 3

Healthy Living and Complementary Therapies

INTRODUCTION

You're sick. And you're sick and tired of being sick. Maybe you've been chronically ill, with debilitating symptoms. Perhaps your symptoms are merely inconvenient, causing minor discomfort. Or, your condition may be life-threatening. Regardless of your situation, though, you want to get better, now!

Desperate, you borrow or buy a frequency device and begin rife sessions, determined to kill or disable the pathogens that are making you sick. But halfway through the first session (or maybe just after it), instead of feeling better, you feel worse. You're achy and nauseated, dizzy and disoriented. Or you develop a headache and sore throat, as though you're catching the flu. Perhaps you have muscle and joint pain, bloating and cramps, skin eruptions. Or you feel fatigued, unable to concentrate. You notice that your urine has turned a bright yellow (unconnected to the golden color it sometimes turns when you take more vitamin supplements than you need). Regardless of your response, you wonder: *Why do I feel so rotten?*

These responses are normal. The technology is simply doing the job for which it was created: the destruction of dangerous microbes.

Pathogens lead busy lives. They steal your nutrients, appropriate your cells, and excrete waste into your bloodstream. They also reproduce, ensuring that more of their nasty little selves will soon emerge to commit the same abuse. After the pathogens are rendered less active

(or in some cases made to shatter) by rifting, garbage is everywhere. The corpses of these harmful critters, along with the toxins they spew, are clogging your bloodstream. The debris floods your tissues and joints, impeding lymph drainage. Junk you never knew existed seeps through the blood-brain barrier, impairing your ability to think, feel, and move. Your immune cells engulf the waste as fast as they can (although it doesn't feel fast enough to you). Once the immune cells have consumed their fill of rubbish and are no longer functional, they'll have to be eliminated.

You'll need all the help you can get to excrete the toxic mess resulting from the rifting. And make no mistake about it: Once you find frequencies that match what ails you, there will be plenty to clean up.

Often, the only help you will need to relieve (or eliminate altogether) the symptoms from pathogenic die-off is to drink more water. More water in the body decreases the ratio of microbial toxins to bodily fluids. If you don't drink, you'll become poisoned from the waste. If you're unwilling to drink more water, I urge you not to rife at all, because otherwise you can make your condition worse. The kind of water to drink, and how much, will be discussed in the next section.

But what if you don't feel any of the above-mentioned symptoms? Does that mean the sessions aren't working? Not necessarily. If there are enough minerals in your system, you won't experience many (or any) symptoms. The detox (also called *Herxheimer*) response is discussed in detail in Chapter 4.

The Electromagnetic Dance of Atoms

Elements are partly attracted to each other because of the direction in which their electrons are spinning. The electrons in the outer shell of one element will jump to the outer shell of another element only if the electrons of the two different elements have opposite spins: clockwise and counterclockwise.

Why? Because the movement of electrons (electricity) creates a magnetic field (just as a moving magnetic field can create electricity). If electrons from two different elements have *same-direction* (parallel) spins, they magnetically *repel* each other. If electrons from two different elements have *opposite-direction* spins, they magnetically *attract* each other. This magnetic attraction due to the opposite spins is so strong, it counteracts the repulsion that one might normally expect to occur between two electrons, both of which by definition possess negative charge.

This partly helps explain what takes place, and why, when people are healed with devices that influence the body's electromagnetic, magnetic, electrical, and other subtle energy fields. Just as minerals can affect the electrical and magnetic fields in the body, electromedical devices (with electrical and magnetic properties) affect the body's minerals.

It's not necessary to learn every detail about how ions are formed. The pertinent is that *the movement of energy, called electron transfer, on the electromagnetic level corresponds to a chemical reaction on the grosser material plane*. Life processes occur when the transfer of electrons take place; and minerals play a vital role in this process. "These ions-in-solution," soil scientist David Yarrow writes, "are valuable for their effects on water's [intrinsic] electrical properties. Most often, they increase water's ability to pass an electric current, or store electrical charge."³ This is why ions are called *electrolytes*.

In the body, different electrolytes are located inside and outside of the cell membrane. These electrolytes have different *electrical potential* or driving force, just like a battery. Through many complex steps involving the flow of electrons across a cell membrane, electrolytes help maintain biochemical and physiological changes crucial for life. Electrolytes are responsible for energy production; ease of respiration; maintaining the distribution of water in the body; the proper function of nerves, muscles and organs; the delivery of nutrients to the cell; the removal of wastes; and *osmotic integrity*, or uniform pressure on the inside and the outside of the cell. (*Osmosis* is the diffusion of water or particles across a semi-permeable membrane. The flow occurs from a higher to a lower concentration, until

both sides equalize with the same amount.) If our cells do not receive adequate electrolytes, among other effects the cell membrane collapses and leaks fluid. The water then becomes trapped between the cells, resulting in what we know as water retention, while meanwhile the cell itself is starved for water and all the nutrients the water carries. An unnaturally permeable cell membrane also leaves the cell more vulnerable to invasion by pathogens and the body's waste materials, which in turn acidifies the system further.

Electrolytes also play a key role in the pH (acid-alkaline) balance of the cells. Most minerals are alkalizing while a few are acidifying. We need *all* minerals to function properly, although most of the minerals required for health (calcium, magnesium, potassium and sodium) are alkaline. Alkaline minerals appear in our drinking water more often than acidic minerals, but not always.

Nothing in the body can function properly without electrolytes. All living organisms transmit an electrical charge. The stronger the electrical potential, the more vital the organism is. Low electrical potential equals illness. No electrical potential equals death. (See Sidebar, "The Amazing Story of Alexis Carrel and His Chicken Heart.")

Water and minerals have a unique relationship. The minerals dissolved in water influence its properties. Water with lots of electrolytes has a lower surface tension, which allows it to be better absorbed. Think of a drop of water on a wooden surface. If the surface is heavily waxed, the water is intact and remains where it is—comparable to the action of non-mineralized water. If the surface of the wood is not waxed, the water seeps more easily into the wood—comparable to the action of water rich in electrolytes.

It's no accident that historically, so-called miracle or healing waters have all been alkaline due to (among other factors) a high alkaline mineral content. In Europe, mineral water is defined as having more than 250 ppm of minerals. (*PPM*, or *parts per million*, is the number of micrograms per milliliter.) Not coincidentally, water that contains electrolytes tastes subtly sweet. Good water is actually quite delicious, and very satisfying as a beverage.

Just a little over 100 years ago, before the Earth became polluted with so many chemicals and wastes, there was ample living water that contained electrolytes—dissolved minerals—which made the water *conductive*, or able to carry an electrical charge. Earth's waters generally had an alkaline pH and plenty of oxygen. Today, this is the exception rather than the norm.

Purifying our water is a necessity. However, what we take out of water is as important as what we leave in. If we remove enough of the beneficial dissolved minerals, we may make ourselves ill. This will become even clearer as I discuss various purification methods.

Basic Filtering (Filtration)

Many people filter their water even if the source is an underground spring or well. Underground water can be contaminated with pathogens, or have an unpleasant taste from chemical additives or mineral deposits whose particles are too large, or are the wrong type of minerals. A good filter removes pathogens, chlorine, and large particles. It always consists of a fibrous core through which the water travels before being released for drinking. Different materials for filter cores include activated charcoal and shredded coconut shell. These substances cannot remove fluoride, although ozone can. (The dangers of fluoride will be discussed later.) In addition to fibrous cylinders, the more sophisticated water purification systems use ozone or ultraviolet light, which produces ozone. In any unit, the filter must be replaced regularly or else the core becomes overloaded with contaminants. Make sure to follow the manufacturer's advice on when to change the filters.

Home filtering units can sit on the countertop, be installed beneath the sink, or be fitted at the water's entryway into the house. Filters are important not only for drinking water, but also for bath and shower water. If your water has been pre-treated with chlorine, try to install a filter at the entryway of your home instead of on individual faucets, as chlorine is very toxic. See Sidebar on page 256, "Chlorine: A Lethal Choice for Water Purification."

One popular and inexpensive water filter consists of a small activated charcoal cylinder inside a pitcher. Water poured into the pitcher passes through the charcoal: the purification process. But most people don't bother to pour a little water over the core first and let that water go down the drain. Instead, they use *all* the water that flows through the cylinder. This means that bacteria collected in the charcoal passes directly into the pitcher, as well as the filtered water. Unless you regularly keep the charcoal core free of pathogens, I would not recommend this type of passive filter. Get a water purification unit that *automatically* puts the filter core through a cleansing cycle with fresh water. The best units also circulate ozone to kill any bacteria that may multiply in the filter.

Distillation

Distillation has become a popular method of cleaning water because it removes more contaminants than does simple filtering: heavy metals, all particulate matter, and most pathogens. (It cannot remove fluoride or volatile organic compounds.) All minerals are also removed during distillation, which is why the process is sometimes called *demineralization*. The elimination of minerals eradicates water's ability to conduct an electrical charge. This makes distilled water an excellent foundation for cleaners, cosmetics, and thousands of other preparations where an electrical reaction would be undesirable. (Distilled water

The Amazing Story of Alexis Carrel and His Chicken Heart

In 1912, French-born surgeon Alexis Carrel won the Nobel Prize in Medicine for devising unique ways to suture blood vessels, repair damaged arteries, and transplant organs. By 1935, together with famous aviator Charles Lindbergh (who was also an environmentalist and an inventor in his own right), Carrel created the first artificial heart.

But the accomplishments of Carrel's that are the most commercially publicized may not be the most important. From 1912 to 1940, the scientist kept a piece of embryonic chicken heart alive in a solution whose minerals were present in the same proportion as the minerals in chicken blood—and which had the same alkalinity (a pH of 7.35 to 7.45). Carrel was careful to change the solution and oxygen every single day. The experiment ended only because he deliberately stopped bathing the heart tissue 28 years later.

Normally, the life span of a chicken is no more than eleven years (assuming she didn't die at around age four from the stresses of commercial, continued egg laying). Carrel was able to keep the heart tissue healthy and alive because *the mineral solution nourished the cells, and the replacement of the fluids every day ensured that all the cellular waste materials were removed*. One of the secrets, then, to health and longevity is not only proper nutrition, but also *waste removal*. Carrel's mineral bath regularly eliminated the waste products of cellular metabolism!

Theoretically, there is no limit to the number of divisions that a healthy cell can undergo, provided it's kept free of metabolic wastes. This has enormous implications for theories about aging. What if so-called "aging" is largely the breakdown of the tissues due to toxification?

Interestingly, Carrel spent many years working at the Rockefeller Institute for Medical Research in New York City until the administration forced him to retire. The Rockefeller family has major ties to the medical-pharmaceutical industry. The Institute bestowed much public praise on Carrel for his undeniably spectacular surgical innovations, but was remarkably quiet about the doctor's discovery that simply keeping the body in its pristine state—with nothing more than oxygen and a mineral bath—may be one of the best-kept secrets to healing, health, and longevity.

is also needed to make colloidal silver, discussed later in this chapter.) The uniformity of distilled water, precisely due to its lack of minerals, ensures that the properties of preparations made with it are consistent with each batch. Thus distilled water is a standard ingredient for industry.

Industry requirements are quite different from drinking needs. Of all the methods to make water drinkable, distillation is the most controversial. The allegations for and against distilled water are many and confusing. It's the best water to drink; it's the worst. It doesn't leach minerals from the body; it does. Or, it leaches minerals from the body, but only the harmful heavy metals. Some people swear that distilled water healed them and they won't drink anything else. Others claim that distilled water causes severe mineral depletion, some practitioners even reporting that clients who exclusively drank distilled water upset their body's mineral balance in just three weeks. Counter arguments assert that although this depletion may occur, it can take a long time. No wonder the average person is baffled!

Water's innate ability to act as a solvent means that it will always contain some minerals. In Nature, though, water without minerals doesn't exist. Therefore, when water is demineralized, it becomes a ferocious solvent. Deprived of minerals (along with any serviceable conductivity), the

now denatured (de-Natured) water seizes minerals from anything it touches so it can replenish itself. It doesn't matter what distilled water seizes: it will grab minerals, metals, chemicals, acids, anything that can dissolve in it.

The thorough removal of minerals via distillation gives water a totally neutral pH of 7.0, at least theoretically. In reality, the pH measurement is lower. Because distilled water is so reactive, the instant it's exposed to air it reacts with carbon dioxide, a naturally acidic gas. This creates carbonic acid, which becomes part of the overall solution. The presence of carbonic acid instantly makes the water acidic. My freshly made distilled water has never tested above 6.8; usually it measures 6.4 or 6.5. My tests of commercially distilled water (bought in supermarkets) have shown even more acidity, with a pH sometimes as low as 5.8. You can test the pH of your own water with a colored fluid available at pet stores, which is used for aquariums. This works better for water than pH strips, which are more accurate for bodily fluids. People struggling with high levels of acidic wastes may be palpably harmed by drinking acidic water.

The carbonic acid issue aside, what are the effects of drinking water that doesn't contain any minerals, or is low in minerals? In "Water—The Choice for Long-Term Health," Michael Donaldson explains:

Chlorine: A Lethal Choice for Water Purification

Chlorine, commonly added to municipal water supplies to kill pathogens, is very dangerous and highly reactive. It readily combines with other substances to form a variety of toxic compounds, including carcinogenic trihalomethanes, nitrogen trichloride (a cause of asthma in chlorinated pools), and other byproducts. These chemicals cause, among other problems, birth defects; cancers of the bladder, bowel, breasts and kidneys; fertility problems; heart disease, including high blood pressure and hardening of the arteries; and immune breakdown.

Chlorine was originally used as a rarefied, deadly weapon during World War I. However, it is so widespread now that its use seems normal. Aside from poisoning the body outright, chlorine—like its chemical relatives fluoride and bromine—displaces the beneficial mineral iodine. This leads to an incredible variety of health problems. Without iodine, the thyroid gland cannot manufacture thyroxin, the hormone used to regulate metabolism. The lack of thyroxin causes problems ranging from abnormal body temperature to depression to a sluggish immune response. Without the germicidal properties of iodine, the body cannot protect itself adequately against infections, including cancer. Most of the iodine the body uses is located in the thyroid, breasts, lungs, and sinuses.

There are many ways in which chlorine can get into the bloodstream. When put into bath and shower water, swimming pools, and hot tubs, chlorine is absorbed directly through the skin. Hot or even warm bathwater causes the pores of the skin to become more open, so any chlorine that's in the water is more readily absorbed. This is why showering in chlorinated water is the equivalent to drinking eight glasses of it at once. Breathing in steam from the hot water allows chlorine to directly enter the lungs, where it damages the lungs' delicate membrane lining and contributes to asthma, bronchitis, and other respiratory conditions. Chlorine is also a serious eyes irritant, causing itching and burning. Even if no serious disease develops, the chemical dries out the skin's natural moisture barrier.

Chronic exposure to chlorine—which is not difficult, considering it's put into drinking water, bathwater and swimming pools—creates chronic inflammation. Over time, cells and tissues become damaged faster than the body can repair them; and cell damage equals disease and aging. Symptoms from chlorine exposure occur long before the chemical can be smelled, at levels over 3.5 parts per million (ppm).

There's absolutely no reason to use chlorine as a water purifier, especially when other, excellent options are available—such as ozone, and bars made from silver and copper.

In the desalination industry [which removes salt, along with all other minerals, from seawater to make it drinkable,] it is an industry-wide rule that water must be partially remineralized before sent down the distribution pipeline because . . . [it] is too aggressive and will cause severe corrosion of the pipeline. . . . One report from a desalination plant in Cyprus producing over 10 million gallons of purified water per day found that iron [from the pipes] was being leached into the water supply. By alkalizing the water [which required the addition of certain minerals]. . . the iron corrosion was stabilized.⁴

Distilled water can corrode metal pipe, but how does it react in a living body? Does it draw toxic metals to itself? What about beneficial minerals? Common sense indicates that once inside the body, any liquid becomes part of the systemic fluids, which by definition contain minerals. Therefore, distilled water will no longer be distilled. Nevertheless, there's ample evidence that distilled water can damage our health. Why is this?

The following data was not easy for me to find because many of the papers on this topic are published in languages other than English, and few have been translated. However, what I did unearth is compelling. The best research on inadequately mineralized water—which of course also applies to distilled—was done decades ago by individuals who weren't selling water filters or distillers. First I'll address water that's merely low in minerals, rather than totally lacking in them.

In 1977, a comprehensive, US government-sponsored, 939-page report called *Drinking Water and Health*, was published by the Safe Drinking Water Committee of the National Research Council. "Several hypotheses are reported on how water factor(s) may affect health," they wrote. "These mostly involve either a protective action attributed to some elements found in hard [mineral-rich] water or harmful effects attributed to certain metals often found in soft [mineral-deficient] water."⁵

Heart conditions and other health problems were strongly influenced by the quality of water.

More than 50 studies in nine countries have been carried out on the possible relationship of water hardness and health . . . A voluminous body of literature suggests that in the United States and other developed nations . . . [there is] an *inverse* correlation between the incidence of cardiovascular disease . . . (heart disease, hypertension, and stroke) . . . and the amount of hardness. . . . Studies in the United States

and Canada have shown that age-adjusted cardiovascular mortality rates among populations using very soft water may be as much as 15% to 20% higher than among populations using hard water. The differential reported for the United Kingdom may be as high as 40%. . . . A few reports also indicate a similar inverse correlation between the hardness of water and . . . risk from several non-cardiovascular causes of death [including the formation of kidney stones and the development of cancer].⁶

The authors considered all possibilities regarding where people might obtain their minerals. The form of the minerals was important, too. The minerals in the hard water that the researchers studied were completely dissolved ions, or electrolytes. The authors also noted which minerals were helpful and which were harmful.

The amount of these elements provided through drinking water relative to other sources is less important than their chemical form. It is theorized that trace elements . . . in foods . . . may be less available metabolically than the ionized form that generally occurs in water. . . . Another possible variable is the different effect of hard and soft waters on the mineral composition of foods during cooking . . . Soft [mineral-deficient] water may remove a significantly higher proportion of various "protective" nutrients and elements from foods during cooking than do hard waters. [This is because both no-mineral and low-mineral waters draw other minerals to themselves in an effort to restore balance.] . . .

Investigators have attributed the disease-protective effect of hard water to the presence of calcium and magnesium . . . [and] vanadium, lithium, chromium, and manganese. . . . The suspect harmful agents include the metals cadmium, lead, [inorganic unbound] copper, and [inorganic unbound] zinc, all of which tend to be found in higher concentrations in soft water as a result of the relative corrosiveness of soft water [which was so corrosive that it leached metals from the pipes].⁷

The results of yet more studies, conducted outside the United States, are summarized by Donaldson.

[A Russian study] compared the populations in two cities that were supplied with different water—one with low TDS [total dissolved solids], low calcium, and low magnesium, and

The Healing Properties of Green Grasses

To many people, “green grass” means the rolling lawns of their favorite golf course or the stuff that causes allergies, wheezing and runny noses in the springtime. However, the right kinds of grass can be healing if they’re in juice or powdered juice form. Wheat and barley are usually used. Their grains cause health problems due to their gluten content, but the young green shoots do not—as long as they’re juiced before they’re 11 or 12 days old, before the grass splits into two blades and begins to form a glutinous seed.

The juice from wheatgrass (*Triticum aestivum*) is 70% chlorophyll and has almost the same chemical structure as the hemoglobin in human blood. It contains all the known minerals, and Vitamins A, B-complex, C, E, and K. Wheatgrass is high in protein (17 amino acids) and antioxidants. It builds blood by increasing the oxygen-carrying ability of red blood cells. It improves immune function, removes toxic metals from the tissues, and contains a compound that kills bacteria. And it’s anti-inflammatory. Studies have also shown that wheatgrass binds to carcinogens.

The juice from barley grass (*Hordeum vulgare*) contains abundant chlorophyll, is rich in iron and calcium and ten other minerals, and is high in Vitamins A, B-complex and C. Barley grass also contains every essential amino acid, with 23% high quality digestible protein in each serving. This grass is becoming famous for helping balance blood sugar levels: studies have shown very favorable results for people with diabetes. Barley grass lowers high levels of “bad” cholesterol and raises levels of “good” cholesterol. It improves circulation. It reduces free radical levels due to its antioxidant properties. And it stimulates the growth of friendly intestinal flora and reduces inflammation.

Grasses must be grown and processed correctly. The best wheatgrass is grown outdoors in soil, slowly (including through the winter)—not rapidly indoors in trays under warm lights, which changes its chemical composition, diminishes its nutrients, and often promotes mold growth. However, those who cannot obtain outdoor-grown wheatgrass do benefit from the chlorophyll in tray-grown wheatgrass. If you use powdered rather than fresh grasses, they should not be processed with heat.

Many people believe that any nausea they might feel is the result of detoxification. However, it’s more likely a result of the grass’s sickening sweetness, which is augmented if it has been grown in weeks instead of months. You don’t need to drink much. Most people begin with ½ to 1 teaspoon of powdered grass in 8 ounces of water, gradually increasing the quantity to 2 tablespoons. Alone, grass tastes like—well, grass, but you can add other ingredients to it.

Canned and bottled juices are not nutritionally valuable. Pasteurization (heating) renders juice useless because the high heat kills the enzymes and many important nutrients. Vital enzymes in juice degrade fairly quickly—usually within an hour after the juice is extracted—so the benefits of juicing are lost if you wait. If the juice is fresh squeezed, drink it immediately.

As juicing creates a very concentrated, therapeutic substance, many practitioners agree that one should consume juices only if there is a special need, such as during a serious illness. People who are ill generally suffer from substandard digestion. The advantage to liquid nourishment is its easy absorption by the body.

Green Juices and Green Smoothies

Many holistic practitioners suggest fresh vegetable juice daily during a cleansing or restorative program. Fresh vegetable juice contains valuable enzymes that catalyze all chemical processes in the body, aid digestion, and repair tissue. People who have a difficult time assimilating solid food can help repair their gut, and acquire valuable nutrients at the same time, simply by drinking juice.

Carrot is considered a staple for vegetable juices, but as previously stated, its sugar content may be too high for people who don’t have cancer but suffer from other, severe infections. Cucumber, celery, and parsley are a good base for a vegetable drink.

The grasses of wheat and barley have tremendous healing capabilities (see Sidebar, “The Healing Properties of Green Grasses”). However, juiced greens are so potent that they can cause the liver to detoxify too rapidly and dump its stored toxins into the bloodstream, which causes nausea and even vomiting. For this reason, beet—which is a potent liver and gallbladder cleanser—should also be used in very small amounts. If you cannot obtain fresh juice, powdered young grasses mixed in water are an acceptable substitute. Be aware that not everyone responds well to fasting on juice alone. You can always use juice to supplement a diet of solid food.

If you don’t own a juicer, or have access to a place that sells fresh squeezed vegetable juice, a wonderful substitute is liquid chlorophyll, sold in bottles at the health food store. Chlorophyll can be regarded as the “blood” of a plant. It has an almost identical composition to human blood, with one major difference. Human blood is high in iron, which gives it a red color, and plant chlorophyll is high in magnesium, which gives it a green color. As most people are deficient in magnesium, supplementing the diet with chlorophyll-rich green juice is wise. If you don’t like the taste of chlorophyll, you can find chlorophyll products flavored with mint to make them more palatable.

While vegetable juice is easy to digest and provides the body with valuable nutrients including enzymes, there's another, equally valid way to eat your vegetables raw: by blending them. This produces a fiber-rich drink that Victoria Boutenko, in her book *Green for Life*, calls "green smoothies." Boutenko wrote that fiber binds excess estrogen, escorts debris from the gut, provides food for the friendly intestinal flora, and even possesses anti-cancer properties. In 2014, when health writer Mike Adams (naturalnews.com) reported that his laboratory tests found heavy metals in many foods (both conventional and organic), he also stated that vegetables and fruit fiber binds and escorts the metals from the body. The value of vegetable and fruit fiber cannot be understated.

Celery, peeled cucumber, lettuces, and lemon (including the peel, if it's organic) make an excellent base for any green smoothie. The addition of parsley, avocado, tomato and garlic creates a rich thick soup or sauce, while banana, mango or apple provide a sweeter shake. Green

smoothies give the digestive tract a rest while providing optimum nutrition. For many people, green smoothies may be a better choice than juice without fiber.

Herbal "Teas"

The recent popularity of leaves, roots, berries and bark that impart such wonderful flavors in boiling water has helped wean people off both coffee and tea. The study of herbology requires an entire book, so only a few highlights will be given here.

As mentioned earlier, only the *Camellia sinensis* plant can technically be called "tea." However, the phrase "herbal tea" has become part of everyday word usage. Even some chain restaurants now offer herbal "teas" along with the usual coffee and tea.

People often like these herbs for their effects as well as their flavor. Although some claim that "tea" herbs (such as peppermint, chamomile, hibiscus flowers and

Beware of Vitamin B12 Analogue in Sea Vegetables

An *analogue* is something that's similar, but not identical, to something else. When dealing with chemical compounds, an analogue can be structurally related and even have similar functions, but it cannot replace the original.

Most of us want the real thing, not an analogue. While some analogues may be suitable substitutes, when it comes to vitamins, an analogue can be downright harmful. Take Vitamin B12. A B12 analogue is similar enough to the real vitamin to latch onto the body's receptor sites for B12. However, the analogue doesn't do the job of B12. Ultimately, it will cause Vitamin B12 *starvation* because as long as the receptor sites are being usurped by the phony, the body cannot access the real vitamin.

Doctors have known about this problem for at least three decades. Just two medical journal articles on the topic are: "Vitamin B-12 from algae appears not to be bioavailable."⁴² and "Vitamin B-12 status of long-term adherents of a strict uncooked vegan diet ('living food diet') is compromised."⁴³ Vitamin B12 analogues are contained in most sea vegetables: spirulina, blue-green algae, and dulse. Interestingly, nori appears to be one of the few seaweeds that contains real (not analogue) Vitamin B12 as long as it's eaten raw and not toasted. (It's almost always eaten toasted, however.) Chlorella, a high-chlorophyll microscopic plant related to algae, is rich in enzymes, vitamins, minerals, fatty acids, mucopolysaccharides, nucleic acids (RNA and DNA), and all the amino acids (chlorella is over 50% protein). Unlike other forms of algae, chlorella doesn't appear to contain significant amounts of B12 analogue. (Keep in mind that the biologically compatible form of B12 is the absorbable *methylcobalamin* and not the cheaper *cyanocobalamin*. Cyanocobalamin contains a tiny bit of cyanide, which the body must expend extra energy to remove.)

The daily requirement of B12 for most people is only about 10 micrograms per day (not milligrams, which is one hundred times more). A B12 deficiency can take more than five years to develop, but when it does occur, severe problems arise. Symptoms include fatigue; weakness; cramping, tingling and numbness in the limbs; heart palpitations; breathing difficulties; constipation, diarrhea or loss of appetite; sore tongue; vision loss; and neurological damage including confusion, depression, memory loss, hallucinations, and dizziness. Anemia develops, which is low systemic oxygen levels due to either an abnormally low red blood cell count or not enough oxygen-carrying hemoglobin inside of the red blood cells. It's the insufficient oxygen that produces many of the B12 deficiency symptoms.

While some Vitamin B12 is made by friendly intestinal flora, additional amounts must be obtained from external sources such as food and nutritional supplements. The most efficient delivery system is animal products: muscle meats, eggs, seafood, dairy products, and especially liver. If one's diet is vegetarian, the need for B12 supplementation is mandatory. If seaweed is a regular part of a vegetarian's diet, B12 supplementation may literally save a life.

True B12 in a food may be ineffective if comparable amounts of its analogue are eaten in the same meal. Unfortunately, the two compete and the phony always wins. However, the analogue won't be a problem if you ingest seaweed several hours away from the real thing, either in the form of animal products or a B12 supplement.

Healthy Spice Drink for a Sweet Tooth

- ◆ 12 cinnamon sticks, about 2¾ inches long (do not use powder, or else the drink will be bitter; see note below about cinnamon)
- ◆ ½ heaping teaspoon whole allspice
- ◆ ½ heaping teaspoon whole cloves
- ◆ 1 heaping teaspoon peeled chopped ginger
- ◆ ½ teaspoon hulled cardamom
- ◆ ½ teaspoon whole fenugreek
- ◆ 1½ tablespoons loosely packed shredded Chinese tangerine peel (*Citrus reticulata*), optional
- ◆ ½ teaspoon powdered green stevia leaf, optional
- ◆ 6 quarts water (less if you want a stronger drink)

Directions. Boil water. Add all ingredients except stevia and don't allow water to boil again. Simmer about 45 minutes, or until the tightly curled *cassia* cinnamon bark flattens somewhat or the *verum* cinnamon falls apart. Strain immediately so the drink doesn't become acrid. Refrigerate for up to three days, or keep overnight in a thermos. This drink is good cold or gently reheated. Add stevia powder just before serving.

Collectively, the ingredients balance blood sugar (*cassia*, more so than *verum*), induce sweating, aid digestion, open the sinuses and respiratory tract, dispel excess moisture, warm the body, and improve cognition. They also have antibacterial, antiviral, and antifungal properties.

Important information about cinnamon. If you're planning to drink a lot of this beverage, be aware that there are about a dozen different species of tree known as "cinnamon." True cinnamon, found in Ceylon and known as *Cinnamomum zeylanicum* or *Cinnamomum verum*, is expensive and hard to find. Its bark is soft, layered and very sweet. Its cheaper, readily available cousin, *Cinnamomum cassia*, has hard, more smoothly textured bark, and is a bit less sweet, with a sharpness to its taste. Although all species of cinnamon bark have similar effects, the true cinnamons contain less coumarin than *cassia*. *Coumarins* are naturally occurring plant compounds that have strong anticoagulant properties. This is important to know because normally, when the body is injured, blood coagulates at the injured site (which is what you want). But if you ingest too much coumarin over a long period of time—which will happen if you drink this beverage often and make it with *cassia*—the blood will no longer coagulate easily when you need it to. On the other hand, *cassia*, more successfully than *verum*, appears to inhibit the progression of Alzheimer's. Therefore, it's worth experimenting with both types.

ginger) have no restorative effects and are merely appealing beverages, herbalists (and my personal experience) indicate otherwise. Even modest "tea portions" of various plants offer benefits. For example, peppermint stimulates better digestion and encourages wakefulness. Chamomile calms the nerves and induces sleep. Hibiscus, with its distinctive tangy flavor, contains many compounds—including quercetin (a bioflavonoid), which helps with allergies and circulation. The **Herbs** section later in this chapter addresses what makes an herb medicinal.

Coaxing satisfying and subtle flavors from herbs is an art. For leaves and delicate plant parts, heat the water to just under a boil and then steep the leaves. Don't let the leaves sit in the water for too long; otherwise, they'll become bitter. Dried berries, bark, and especially thick rinds, which contain numerous heavy layers of tough plant cellulose, require a more rigorous approach of boiling for 20 to 40 minutes, and occasionally longer.

Ginger root has a well-deserved reputation for being the most widely used herb on the planet. A favorite with cooks, ginger also relieves colds, allergies, arthritis and asthma, and helps protect the digestive tract and liver from toxins and parasites. It also stimulates digestion and alleviates nausea, making it popular during pregnancy. See Insert of a drink I invented, "Healthy Spice Drink for a Sweet Tooth." It uses ginger as a main ingredient and doesn't contain sugar or fruit. The number of non-caffeinated beverages is limited only by your imagination.

FOOD

One Size Does Not Fit All

Did you ever go shopping for a "one-size-fits-all" bathrobe? If you're 5 feet tall (my height), and if you have a friend who's 6 feet tall (like my business partner), and both of you try to fit into the bathrobe, you'll quickly learn that this claim does not coincide with reality. Yet the public is constantly told that this one-size-fits-all mentality applies to everything, including diet.

No one can dispute that good health depends on eating properly. The problem is, even "experts"—in holistic as well as mainstream medical arenas—disagree as to what constitutes the optimum diet. There are many types: macrobiotic, vegetarian, vegan, raw food, Ayurvedic, high complex carbohydrate, low fat; the list is endless. Have you ever asked yourself why popular diets contradict each other so much? "How can they all be right?" you wonder. "Why does my friend lose weight when she eats certain foods, and I gain weight when I

eat those same things?” Or, “Why does a juice fast make my husband feel great, while I just feel tired?”

Many factors determine the best diet for an individual: genetics, race, cultural practices, body type, season, age, health status, environmental toxin exposure, and belief systems. Of the many factors to consider in planning an optimal diet, a few variations are discussed below.

Geographical Ancestry

In *Nourishing Wisdom: A Mind-Body Approach to Nutrition and Well-Being*, nutritional psychologist Marc David notes that the diets of the Earth’s peoples who “live near mountains, oceans, rivers, deserts, tundra, tropics, forests, and flatlands” are as varied as the terrain that grows their food. “Is it sensible for any one . . . to tell another about the ‘true’ way to eat? Can a tribesman from West Africa whose staple food is cassava root tell an Eskimo he is wrong because his staple food is fish? Or can the Japanese tell the Mexicans of the absurdity of eating dairy, corn, hot peppers, and food fried in lard, staple products completely unknown to native Japan?”⁴⁴

“Following a fad diet or a computer-generated diet will only have limited value,” writes nutritionist Judith DeCava in her whimsically titled article, “Food Fights.” “A ‘one-size-fits-all’ approach to diet and all other universal dietary recommendations overlook the tremendous amount of biochemical and physiological diversity among individuals. . . . While one’s specific ancestral heritage may be of critical importance in ascertaining ideal foods to consume, identifying the diet that will best support one’s health is much more complicated . . . There are simply too many factors that influence nutritional needs. . . . No wonder the diet ‘experts’ are essentially unable to achieve consistent, predictable results with their followers.”⁴⁵

Gut Flora

The assimilation and metabolization of foods is hugely dependent on the flora living in the gut—also known as the *microbiome* population—which is inherited from the mother. The gut houses between 300 and 500 species, whose numbers are twice the amount of cells in that same human body. These flora should be respected: They regulate our cravings, motivation, moods, and even our outlook on life. They also help regulate weight. When a greater variety of flora from skinny mice were implanted in mice who normally become obese, the hefty rodents slimmed down. The opposite held true: slender mice became fat when their microbiome population was altered, due to implants from their fatter counterparts. Humans react the same way. Just one article of many is “Impact of the Gut Microbiota on the Development of Obesity: Current Concepts,”⁴⁶ written in 2012.

Biochemistry and Metabolism

In the last couple of decades, diet books have emerged that are based on some form of biochemical assessment. De Cava points out some of these factors: the individual’s metabolic rate, acid-alkaline balance (it’s more complicated than you might think), and sympathetic or parasympathetic nervous system dominance. When all the unique biochemical aspects of the body are considered, she concludes, people represent at least five thousand variations in biochemistry.

Despite the complexity of human biochemistry, most popular literature is based on simplistic science—if indeed it could be called “science” at all. One book suggests eating food according to endocrine type. Another bases food choices on blood type. Yet a third system, prevalent in books and on the Internet, arranges foods according to their presumably acidifying or alkalizing effects on the body, and teaches that inherently acid or alkaline foods affect the body’s pH correspondingly once they’re ingested. Enthusiastic devotees claim that most people are too “acidic,” and eating so-called alkalizing foods will correct the acidity. The problem is, one’s endocrine or blood type plays just one role of many in ideal diet; and most of the information on food and systemic pH is incorrect. Physician Harold Kristal and co-author James Haig explain variations in metabolism that cause people to be affected in opposite ways when eating the same foods. “Major Tenets of Metabolic Typing,” from their book, is so important that it’s a Sidebar on the next page.

Conventional nutritional wisdom holds that any particular food will have the *same* pH effect in anyone who eats it. Thus it is commonly said that protein foods (especially animal proteins) are generally acid forming, and that fruits and vegetables are generally alkaline forming. But, in the world of Metabolic Typing—where *blood* is being used as the primary pH marker—this would only be true of the two Autonomic types [signifying whether the sympathetic or parasympathetic nervous system is dominant for energy control]. For the two Oxidative types [signifying how rapidly food is converted into energy], the opposite would apply: most animal proteins would be alkaline forming, and most fruits and vegetables would be acid forming. Almost all other nutritionists who work with pHs use urine and/or saliva—not blood—as their primary marker. This is simply for ease of access. . . . [But] urine and saliva [are] much more changeable and, therefore, less reliable as metabolic markers than blood pH. . . .⁴⁷

Major Tenets of Metabolic Typing

- ◆ We are all biochemically unique, with different constitutional and genetically inherited nutrient requirements.
- ◆ People are predisposed to greater or lesser dominance in either the Oxidative system (the conversion of nutrients into energy) or the Autonomic system (the distribution of that energy via the autonomic [involuntary] nervous system).
- ◆ The Oxidative system consists of Fast and Slow Oxidizers (determined by the speed at which they convert nutrients into energy).
- ◆ The Autonomic system consists of Sympathetic and Parasympathetic types (determined by which of the two branches of the autonomic nervous system is more active).
- ◆ There are foods that are bad for everyone (sugar, white flour products, partially hydrogenated oil, deep-fried foods, chemical additives, etc.).
- ◆ There are good foods that are bad for you, as well as good foods that are good for you, depending on your Metabolic Type.
- ◆ Any given nutrient or food can have virtually opposite biochemical effects in individuals of different Metabolic Types.
- ◆ Foods and nutrients that acidify the two Oxidative types (Fast and Slow Oxidizers) alkalize the two Autonomic types (Sympathetics and Parasympathetics); foods and nutrients that alkalize the Oxidative types, acidify the Autonomic types.
- ◆ An ideal venous blood pH of 7.46 reflects the biochemical balance and metabolic efficiency of a balanced metabolism.

—Harold J. Kristal and James M. Haig
*The Nutrition Solution:
 A Guide to Your Metabolic Type*, 2002

Holistic proponents can be as dogmatic about their preferences as allopathic physicians can be about theirs. For example, the late Robert Atkins promoted a high-protein, relatively high fat and low carbohydrate diet. Dean Ornish promotes a high-carbohydrate, low-fat and low-protein diet. During a television debate between the two doctors, the reason for their preferences was revealed. DeCava reports that after they presented clinical evidence and scientific studies,

Dr. Atkins explained how *his* health improved when he began to follow the diet he now advises for everyone. Dr. Ornish then told how *his* health improved when he changed his diet to the one he now urges people to follow. The same is true for most all diet promoters—whether popular authors or clinicians in private practice—the diet that works for him/her is the one thought to be ideal for all.⁴⁸

It's easy to mistake suggestions for dogma. The way in which a diet is implemented by the public can be quite different from the intentions of the original diet. Or, the reasons for which a diet was developed may not apply to the current user. This appears to have occurred with *macrobiotics*, an approach with purported ties to Japanese Zen Buddhism but which was developed and popularized in the 1950s. The basic tenets of macrobiotics are to eat, in moderation, locally grown food that's in season, with minimal animal protein. Most people, even some high-profile macrobiotics advocates, adhere to a one-size-fits-all diet consisting of rice, vegetables, some seaweed and pickled condiments, and a little bit of fish. This approach has many flaws. What normally might constitute a lovely meal is eaten every day, which for some people can cause nutritional deficiencies and lead to illness. The “fresh, locally grown food” rule can vary widely, depending on one's location. The Inuit (Eskimos) who eat seal meat and blubber (fat from sea mammals—in fact, comprising 80% of their diet) are practicing macrobiotics principles, as are residents of Panama who munch on bananas, coconuts and tamarillos picked ripe almost year round.

Traditional Chinese Medicine (TCM) has a distinctly individual approach to diet. A revealing article in the *Journal of Chinese Medicine*, called “Chinese Nutritional Therapy: A Simple Framework For Prescribing Dietary Recommendations,” asks simple questions. The author appeals to common sense rather than fad.

So what is a healthy diet? From the perspective of Chinese dietary therapy there is no simple answer to this important question. Or rather the answer lies in two counter-questions: “A healthy diet for who” and “A healthy diet when?”⁴⁹

No wonder the average reader has such a hard time with well-meaning diet books!

People's physiological differences undoubtedly form the basis of emotionally-laden opinions on what is good or not good to eat. For example, some people cannot handle moderate amounts of even complex carbohydrates. Too many carbs make them feel mentally unfocused, tired and sick, and cause weight gain. They find red meat perfect

for building their strength. Their counterparts, who cannot digest red meat (or cannot emotionally tolerate the idea of eating it) thrive more on grains and vegetables. I have noticed that some very strict vegetarians and vegans sharply criticize others for eating meat, with a level of emotional charge that seems excessive. Could it be that their diet is causing them to suffer nutritional deficiencies—and corresponding emotional angst?

That said, there are some “foods” that aren’t good for anyone: fake foods. Popular diets that recommend eliminating junk, chemicals, and refined carbohydrates inevitably help most people to some extent. This is why so many diet books on the market that advocate real food instead of junk seem to hold the key to your health (until you find that they don’t).

Each individual has a unique biochemistry, needs, and preferences that cannot be addressed by a simplistic one-size-fits-all system. And sometimes, despite our favorite theories, opinions and even preferences, we need to change what we are eating if we want to feel better.

Current Needs and Health Conditions

What helps you during one period of your life may not work for you during another. “Unlike the horse that must have grain or the lion that must have meat, humans can and do switch metabolic needs, often in midstream as they are healing and reaching a new plateau of wellness,” writes DeCava. “Healing bodies have very different requirements from healed bodies.”⁵⁰ Just as with Rife Therapy, when you use frequencies for *Candida* one day and *Staph* the next—and on some days you don’t do sessions at all—you may find it wise to similarly experiment with your food.

What your ancestors ate can play a major role in what you are evolutionarily designed to eat. However, this guideline can—and should—be modified if your lifestyle is radically different from that of your forebears. For instance, a century ago the people who were farmers needed high-calorie diets high in meat, fat and starch to sustain them for heavy manual labor. Today, more people sit at desk jobs than work in the fields. Such a diet would not only be unsuitable, but would in fact be harmful. Our needs change according to circumstance and location.

Buildup, Breakdown or Maintenance

One interesting dietary paradigm describes the way in which a food affects the system. It either builds up the body, helps the system cleanse and detoxify, or maintains the body. While these effects can vary because people differ in how they metabolize and assimilate, a food will still tend to exhibit one (and sometimes two) of these three functions.

Problems arise if a food’s benefits are not compatible with what your body needs at the moment. This frequently occurs when people eat certain foods to eliminate wastes from their system when they are ill, but continue the same diet when they are well. For instance, as David writes:

Therapeutic diets often facilitate dramatic healing . . . [but] this does not mean they will continue to work on an everyday basis once the body is healed. Often a diet provides therapeutic benefits for a specific period of time and loses its effectiveness when the natural limits of its healing powers are reached. We have seen an example of this in cleansing diets that have positive benefits yet cause negative reactions once the body moves in a building phase.⁵¹

In her wonderfully written and researched book *Food and Healing*, Annemarie Colbin explores this topic in depth. She also discusses the biochemistry of foods, how and why different nutritional systems developed, and which diets work best according to the environment and unique stresses under which the person is living. Although this book was written in 1986, it’s as relevant today as when it was first written.

Nutrient Balance

Another aspect of a food’s suitability is its proportion of proteins, carbohydrates and fats, or its contribution to the total protein, carbohydrate and fat content of the entire meal. The nutrient content of a food (vitamins, minerals, essential fatty acids, enzymes, etc.) also contributes to one’s overall feeling of wellness. People require different amounts and types of nutrients, depending on their metabolism, level of physical exercise, mental exertion, climate in which they live, and state of wellness or illness.

Fads, Trends, and Bald-Faced Lies

Fad is defined by Webster as “an exaggeratedly fussy attitude, especially about eating or not eating certain kinds of food.” My definition of a “fad” is:

- ◆ You keep eating a certain way, even though you look and feel worse.
- ◆ You keep eating a certain way because it is advertised and talked about, even though you look and feel worse.
- ◆ You know all of the “scientific reasons” for eating this way, even though you look and feel worse.

—Mary Frost

Going Back to the Basics of Human Health, 1997

- ◆ *Safest.* Fish that can safely be eaten more than once a week are anchovies, Atlantic butterfish, Atlantic herring, oysters (farmed), mackerel, Alaskan sablefish (black cod), *wild* Atlantic salmon, canned pink or sockeye salmon, sardines, and squid. The following are noted by other sources as provisionally safe (young children may eat these fish no more than once a week): black sea bass, haddock, hake, Pacific cod, yellowtail flounder, Pacific whiting, shad, and sole.
- ◆ *Reasonably Safe.* Abalone, striped bass, Arctic char, bay scallops, catfish, caviar, clams, blue mussels (farmed *and* wild), sturgeon, and shrimp from the US. Also crab (Dungeness, snow from Canada, and stone), crawfish, Pacific halibut, lobster, Atlantic mahi-mahi, shrimp from Canada, spot prawns, and tilapia.
- ◆ *Somewhat Safe.* Atlantic cod, Atlantic halibut, monkfish, skate, snapper, and tilefish.
- ◆ *Unsafe.* Grouper, marlin, orange roughy, Pacific rockfish (rock cod), farmed Atlantic salmon, Chilean sea bass (toothfish), shark, wild sturgeon, swordfish, and bluefin tuna.

Canned fish retains much of its food value. However, it often contains preservatives and texturized vegetable protein (TVP). In the body, TVP breaks down into poisonous glutamic acid, the so-called “active” ingredient in monosodium glutamate (MSG), discussed in detail shortly.

Dairy

This includes milk from cows, sheep, goats, buffalo, camels, mares, and other mammals. It also includes the butter, whey, cream, cheese, buttermilk, yogurt, quark, and other products made from their milk.

In Chapter 1, the damage to both cows and humans from recombinant Bovine Growth Hormone (rBGH) was explained in detail. As of this writing, the use of rBGH and Bovine Somatotropin (BST) has been banned in Canada, Japan and Australia, and by all 25 countries of the European Union. In the United States, some dairies refuse to use this synthetic hormone. The best way to avoid it is to either buy domestic products specifically labeled organic or BGH-free, or European cheeses, which never contain these hormones.

There’s another important feature of dairy products: raw versus pasteurized and homogenized. You are receiving only a fraction of what dairy foods have to offer if you’re not eating dairy raw, and from grass fed animals. In fact, you’re harming yourself *unless* you eat raw dairy. The pasteurization and homogenization processes damage milk in different ways. I’ll discuss pasteurization first.

Pasteurization involves heating the milk at a temperature of 145°F to 150°F (62.8°C to 65.6°C), and then cooling the milk to at least 55°F (12.8°C). The milk remains hot from 15 to 30 minutes. With “ultra-high temperature” pasteurization (UHT), temperatures are raised to 280°F (137.8°C) for at least two seconds. This supposedly extends the shelf life of refrigerated milk for six months.

All pasteurized milk is adulterated and dead; I would not use the word “food” to describe this fabrication. The stated purpose of pasteurization is to destroy germs that carry disease and to prevent milk from souring. But these goals aren’t achieved, as pasteurization kills beneficial as well as harmful bacteria. Normally, if raw milk is allowed to sit, the beneficial lactic acid bacteria will (desirably) sour the fluid, which makes the milk highly assimilable and even healing to the digestive tract. The fear that raw milk easily spoils contradicts the historical use of raw milk to preserve meat. For centuries, Arabs preserved meat in raw camel milk. People from Iceland preserved sheep’s heads in soured raw milk. In the United States, pioneers preserved meat in raw buttermilk and enjoyed meat all year round. The truth is, *it’s the heating that allows the milk to spoil, and to spoil more quickly*, because it escalates bacterial growth exponentially. The milk gradually turns rancid in a few days, and then decomposes. When raw milk is left alone at moderate temperatures, it simply ferments into a healthful, cultured product.

Note that pasteurization doesn’t remove dirt, and it doesn’t eliminate or immobilize the wastes that the bacteria produce. Thus, even organic pasteurized and homogenized milk can cause problems because it contains toxins along with the remains of the dead bacteria killed by pasteurization. Symptoms include indigestion, respiratory distress, excessive production of mucus, fatigue, brain fog, and muscle and joint pain.

Misinformation about raw milk being full of germs has been widely disseminated. Before the advent of high-tech pasteurization methods that ruined good milk, raw dairy was used as a tonic for hard-to-treat illnesses. Dr. Ron Schmid’s “Real Milk” website contains lots of interesting data. It also features excerpts from an article by a Dr. J. Crewe of the Mayo Foundation (forerunner of the famous Mayo Clinic in the US). The article—which was originally published in the January 1929 issue of *Certified Milk Magazine*⁶⁸ and quoted from the eighth edition of the medical text *Principles and Practices of Medicine*—summarized the therapeutic use of raw, butterfat-rich milk from pasture fed cows. Many diverse conditions were successfully treated with such milk, including hypertension and other cardiovascular conditions; nervous system ailments; nephritis and other

kidney problems; psoriasis; and tuberculosis. A Dr. Crewe presented his findings to the Minnesota State Medical Society in 1923. At that point, he had been successfully treating people with raw milk for 15 years. More current sources, including physician William Campbell Douglass and the Weston A. Price Foundation, cite the use of raw milk (and raw whey) in eradicating many diseases, including asthma, stomach ulcers and diabetes.

The high heat of pasteurization also destroys almost all of the crucial vitamins, minerals, enzymes, and other nutrients that make raw milk so healthy. In fact, the gauge of pasteurization's success is based on the destruction of enzymes! (See Insert on pages 302–305, “Comparison Chart between Raw and Pasteurized Milk,” to see what's destroyed as well as the effects of the destruction.)

For decades, the cattle dairy industry has called milk the perfect food due to its substantial calcium content. This may be the most popular selling point of milk, but ironically the heat of pasteurization makes most of the calcium unable to be dissolved, and hence unusable by the body. Not only is a calcium deficiency created—which can lead to soft, improperly formed bones and teeth—but the insoluble form of calcium can cause constipation and the formation of calcium deposits (stones) in the body.

Now let's discuss homogenization, which also damages milk. The milk is pumped at high pressure through a small opening to disperse the heavy, creamy fat molecules throughout the fluid. This makes the fat molecules smaller, and of uniform size and consistency. (Otherwise, the cream would rise to the top.) This process is not benign. Fats expert Mary G. Enig, PhD, writes:

There is a tremendous increase in surface area on the fat globules. The original fat globule membrane is lost and a new one is formed that incorporates a much greater portion of casein and whey proteins. This may account for the increased allergenicity of modern processed milk.⁶⁹

Detractors of raw milk associate it with unclean conditions. However, cows raised for raw milk are much more heavily inspected than cows raised on factory farm dairies. Raw dairy farmers must keep the cows, their living quarters, and the milking equipment scrupulously clean. Several people employed by commercial (non-raw) dairies have told me that they saw batches of processed milk with “unacceptable” levels of contamination made “acceptable” again because cleaner batches were added to the contaminated ones—thus bringing the total contamination levels within the range allowed by law.

The FDA works hard to prevent people from having access to raw milk. Some farmers in states that prohibit

raw milk sell cow shares. The shareholders visit the farm daily or weekly to fill their own containers with fresh milk. In response, FDA agents have trespassed onto several of these farms and confiscated the milk, even though the shareholder program is legal. One must ask, “Whose interests does the FDA really represent?”

Even though raw milk has been a beneficial staple in the diet of millions of people for centuries, not everyone can metabolize it. There are several possible reasons for this. First, people of Asian, Eastern European, Native American, and (in some instances) African ancestry lack the enzymes to digest cow dairy—probably because their forebears did not eat dairy as part of their traditional diet, and therefore never developed the requisite enzymes. In these cases, even the enzymes already present in raw milk are not adequate to help overcome milk intolerance.

People who negatively react to *lactose*, or milk sugar, can take a *lactase* enzyme supplement, which digests milk sugar. If the body's bile stores are depleted, fat-digesting enzymes can be taken. However, even supplementation may not be enough to restore tolerance. We know this thanks to recent research on proteins in milk.

Beta-caseins, the second most abundant proteins in cow's milk, are divided into two groups called *A1* and *A2*. Each has a different amino acid located at position 67 on the protein chain: *A1* contains histidine and *A2* contains proline. When the body breaks down the *A1* beta-casein, it creates an irritating fragment called *beta-casomorphin7* or *BCM7*, which is an opiate and oxidant. High levels of *BCM7* are present in the blood of people with autism, schizophrenia, and possibly diabetes and heart disease. In contrast, *A2* doesn't irritate. It's the sole protein in goat, sheep, camel, yak, and human milks. It was also the sole protein in cow's milk until a mutation occurred in the bloodline of European cattle centuries ago. *A1* proteins are present in the milk of the majority of cows from Western countries, while *A2* proteins are in the milk of cows living in Asia, Africa, and portions of Southern Europe. Today, most dairies raise *A1* Holsteins, which are black and white. However, milk from most Jersey and Guernsey cows, and probably all Normande cows, is *A2*. Interestingly, it appears that all *A2* cows are brown. Some *A2* animals are now being bred in New Zealand, the US, and Australia. The only sure way to determine which proteins are in dairy is to conduct a DNA test on the cow.

People negatively affected by *A1* milk might be able to handle *A2* milk. Camel's milk has the reputation of containing beneficial anti-inflammatory compounds. As a general rule, milk from smaller animals is more easily assimilated by humans because the fat molecules are on a smaller (human) scale. Also, the nutrient proportions in

Despite issues with the indigestible bran and hull, the natural foods movement routinely promotes whole, or *unrefined*, grains. *Refined* grains are stripped of the outer germ and bran, leaving only the starchy white center (endosperm). The absence of perishable ingredients—virtually all vitamins, minerals, delicate natural oils and fiber—allows refined grains to remain on a shelf indefinitely. This means they can't support life. In experiments with rats and other animals, they die quickly when fed a steady diet of refined grains. When humans eat refined grain, the body draws on its own store of nutrients to process the empty-calorie starch. Nevertheless, some people who react badly to whole grains can eat refined flours with no obvious ill effects—undoubtedly because they're avoiding the noxious chemicals in the hull and germ.

The apparent lack of symptoms when eating refined flour doesn't mean that it's good for you. Aside from the lack of nutrients, most commercial breads, cakes, pies, and pastas are made from refined wheat flour that's been bleached a dazzling white. The toxic bleaching agents (chlorine or nitrogen oxides, potassium bromate) combine with the few remaining proteins in the starchy endosperm to produce *alloxan*. Alloxan destroys the beta cells of the pancreas, making it impossible for the gland to produce sufficient insulin. "Scientists have known of the alloxan-diabetes connection for years," writes Dani Veracity. "In fact, researchers who are studying diabetes commonly use the chemical to induce the disorder in lab animals. . . . Even though the toxic effect of alloxan is common scientific knowledge in the research community, the FDA still allows companies to use it when processing foods we ingest."⁷²

All grains have a high carbohydrate content. They affect the body like sugar (see the next section on sweeteners), and wheat is the most harmful. Humans are biochemically more equipped to handle animal protein, roots, leaves and fruits than grains, as agriculture occurred much later in history than did hunting and the gathering of wild foods.

Many people suffer health problems especially when they eat wheat and its relatives. These grains contain storage proteins called *prolamins*, which are utilized by the plant when it grows. (Other grains contain different storage proteins that aren't as problematic.) Prolamins, soluble only in alcohol, can't be broken down by stomach acid and impair our ability to digest protein. *Gluten*, a glue-like complex containing the prolamin *gliadin*, is the best known toxic plant compound, although there are many more. Wheat, the most common grain in the world, contains the highest levels of gluten. It's also adulterated, and thus causes unlimited health problems (see Insert, "Wheat: Not a Healthy Choice").

Here are some popular grains and grain-like seeds. The first four contain highly problematic prolamins.

- ◆ *Wheat*. Contains the prolamin *gliadin* within the much larger *gluten* complex. There are many varieties of the *Triticum* or wheat family: spelt, kamut, durum, and frumento. Ancient heirloom varieties of wheat are einkorn (the original simple grain) and its more complex descendent emmerwheat. Farro is a dish containing the berries of these ancient varieties. (Wheat *grass* and barley *grass*—juiced for their chlorophyll and nutrient content—are not the grains, but the sprouted green grasses of the young plants. They don't contain prolamins during their first eleven days of growth.) Manufactured wheat products include pasta (compressed, usually refined wheat flour made into noodles of various shapes), orzo (rice shaped pasta), semolina (the starchy inner kernel of durum wheat), couscous (pasta made from semolina), farina (made from the starchy inner kernel, minus the bran and most of the germ), freekeh (roasted green durum wheat), and bulgur (boiled and dried). Wheat is also referred to as graham, cake flour, or simply "flour." Wheat-derived products include hydrolyzed wheat protein, wheat starch, and wheat germ. Seitan, prized by many vegetarians, is the most glutinous portion of the grain, processed into its stickiest possible mass and cooked to resemble meat.
- ◆ *Barley*. Contains the prolamin *hordein*. Products made from barley include "pearled" barley, barley malt (sometimes simply called "malt"), and beer.
- ◆ *Rye*. Contains the prolamin *secalin*. It's in the same family as wheat, although some people find it less problematic than wheat.
- ◆ *Triticale*. A hybrid of wheat and rye, triticale contains prolamins from both.

The following grains also contain prolamins, although they cause far fewer problems than those of the first group.

- ◆ *Oats*. Contains the prolamin *avenin* in very small amounts, which is well tolerated by most people.
- ◆ *Corn / Maize*. Contains the prolamin *zein*, which for some people is a problem. Different corn varieties have different amino acid profiles. Yellow and white corn contain high levels of arginine (which feeds the *Herpes* virus). Blue corn contains high levels of lysine (which inhibits *Herpes*) and low arginine levels. Some people who can't handle yellow or white can tolerate blue.
- ◆ *Sorghum*. Contains the prolamin *kafirin*. It may cause gut issues, though much fewer than those from gluten.

The following don't contain prolamins, although they do contain other (far less problematic) storage proteins.

Wheat: Not a Healthy Choice

Injurious, Not Essential

There's an old saying, "Bread is the staff of life." People "break bread" when they are invited to share a meal. The word "bread" suggests something so basic, it has even become a slang term for money. But is bread really as important as history claims?

Bread is indeed significant, but for different reasons than we might think. In the Western world, bread is synonymous with wheat. So are cake, pie, pastry, and pasta. However, according to many physicians' clinical experiences and solid scientific research, wheat is a poison. We can no longer ignore the compelling evidence of a long list of conditions that are exacerbated or (more often) outright caused by gluten and other toxic compounds. Let's first take a look at what wheat really is.

Botany Basics and the History of Human Tampering

Wheat is a grass, and the seeds on top of the grass stalks are what we refer to as "grains." Einkorn (*Triticum monococcum*), the most ancient wheat, was nothing like its modern counterpart. The DNA of einkorn was simple, containing only 14 chromosomes. Lacking the complex sticky proteins of modern wheat, einkorn could never have formed the breads, bagels, pastries and crullers that people love to eat today. In fact, bread made with einkorn was not only significantly less elastic and sticky, it was somewhat crumbly.

At some point einkorn either naturally cross-bred or was cultivated with goatgrass, an unrelated wild grass (*Aegilops speltoides*), to produce emmer wheat (*Triticum turgidum*). The DNA structure of emmer became slightly more complex, at 28 chromosomes, because unlike humans, animals and many other plants, when wheat is hybridized it *adds on* the genetic material of its "parents." For thousands of years, einkorn and emmer were popular until emmer wheat cross-bred—probably naturally, in the wild—with another type of goatgrass (*Triticum tauschii*). This birthed *Triticum aestivum*, which is genetically close to our modern wheat with a chromosome count of 42. This newer *Triticum* wheat had a much higher yield. It also contained stickier proteins, making it more desirable than einkorn and emmer for baked goods.

When pioneers brought *Triticum aestivum* from Europe to the Americas in the 1600s, wheat underwent another radical change, this time caused by humans. The settlers bred a plant that would survive extreme temperatures, resist drought and disease, and yield more per acre. The original tall grass, which had required a long maturation period, was now dwarf with a rapid growth cycle. In addition, its larger seeds, rather than clinging to their stalks, could be shaken off easily for harvesting.

The most radical alterations to *Triticum aestivum* began in the 1940s, when scientist Norman Borlaug spent almost two decades changing wheat's DNA structure to produce even greater yields. This modern wheat comprises 99% of wheat grown worldwide today, with thousands more genes than what existed in the original plant. In fact, modern wheat hybrids contain proteins that didn't even exist in its *parents* one generation ago! It shouldn't surprise us that these new proteins are biologically incompatible with the digestive tract, immune cells, cardiovascular structures, and every other system—not only in humans, but in animals too. Although the breeding was done manually, the effects were similar to those produced when plants are genetically engineered. Thousands of new strains of modern wheat have become integrated into our food supply, but none have ever been tested for safety. In *Wheat Belly*, cardiologist William Davis writes that:

the incredible financial bonanza that the proliferation of wheat in the American diet has created for the food and drug industries can make you wonder if this "perfect storm" was somehow man-made. Did a group of powerful men convene a secret . . . meeting in 1955, map out an evil plan to mass-produce high-yield, low-cost dwarf wheat, engineer the release of government-sanctioned advice to eat "healthy whole grains," lead the charge of corporate Big Food to sell hundreds of billions of dollars worth of processed wheat food products—all leading to obesity and the "need" for billions of dollars of drug treatments for diabetes, heart disease, and all the other health consequences of obesity? . . . in a sense that's exactly what happened.⁷³

Several Nasty Compounds

All grains / seeds contain storage proteins—a combination of amino acids, minerals, and other substances that exist to help the plant when it's first growing. Especially problematic storage proteins, *prolamins*, are in wheat, rye, and relatives of wheat. *Gluten*, the most well known protein complex, contains several different prolamins (one called *gliadin*), all of which impact very negatively on our health. Gluten protein structures repeat, which creates strong dough. And gluten's tenacious, glue-like stickiness makes it ideal for bread and other fun baked products. But this long stretchy adhesive quality contributes to, and causes, unlimited health problems—ranging from gastrointestinal ailments to degenerative diseases to autoimmune disorders. Following are some of these health conditions and why they occur.

Orthorexia, the New Eating Disorder

A Newly Named Affliction. What happens when you are “too” concerned about the quality of your food? In the United States, thanks to medical doctor Steven Bratman, you now have a new disease: *orthorexia nervosa*. This new “illness” describes undesirable behavior and attitudes that center around food.

Orthorexia Defined. The term *orthorexia nervosa* literally means “correct appetite.” Loosely translated, it means “correct diet.” Even more loosely translated to refer to the general population, it means “the desire to eat healthfully, which is a disease.” Whereas the eating disorders anorexia nervosa and bulimia nervosa pertain to the *quantity* of food consumed, orthorexia pertains to the *quality* of the food.

Bratman’s 2001 book, *Health Food Junkies: Overcoming the Obsession with Healthful Eating*, describes people who have restricted their diets so much that their health has suffered. Bratman himself is familiar with various diets: raw, vegetarian, macrobiotic. When he was younger, Bratman (a self-diagnosed “orthorexic”) rigidly adhered to strict diets on the advice of “food gurus” whom he blindly obeyed. Later as a physician, Bratman was consulted by rigid clients who likewise abused eating. Some couldn’t stop obsessing about food for so many hours, that they could do nothing else. Macrobiotic parents, adhering to what they believed was a rule about limiting water intake, allowed their child only four ounces of water a day—causing the child to become dehydrated. A vegan husband, convinced of his moral correctness, divorced his wife—because she ate meat. And a woman who refused to eat animal protein became deficient in vital amino acids—and, fainting from weakness, crashed the car she was driving and died. In fact, several people died from malnourishment because they insisted on adhering to unrealistic, inflexible theories of eating instead of paying attention to legitimate, but suppressed, messages from their own bodies.

Such extreme behaviors indicate very real and severe emotional problems. The psychological root could be a need to feel in control over one’s life (in any area), a need to feel safe (by controlling food intake), the desire to be “perfect” (by adhering to an unyielding, demanding protocol), or the need to feel special (by eating in ways that are different from the eating habits of most others). Unsurprisingly, rigid individuals often become intolerant of other people’s views about food and health. Convinced that there’s only one correct way to eat (their way), they follow dietary protocols as one would a religion. The diet religion helps one feel holy, superior, and achieve a sense of belonging to a group of people who eat similarly and may tend to proselytize.

A Psychological Analysis. While Bratman correctly observes and justifiably critiques extreme behaviors, the focus on food itself as the disease is misguided. Instead, the underlying emotional issues that are expressing themselves through eating should be addressed. Let us use rape as an analogy. Today, we understand that rape is not related to sex, love or lovemaking. It *is*, however, related to the need to feel powerful by controlling others (and a venting of rage). Similarly, rigid dieting is not related to nutrition or health. It *is*, however, related to the need to feel powerful and seize control because *other* areas of one’s life feel so out of control. *Any* dysfunctional emotion can manifest in many ways, including how (and how much) one eats. Sick and not healthy people consult Bratman, so he has undoubtedly encountered a disproportionately large number of people who abuse food. But what about those who don’t feel a need for his services? Or people whose illnesses have induced them to seek new ways to heal?

A Natural Health Analysis. The creator of this new disease doesn’t always understand (or respect) natural medicine. Ignoring the data on heavy metals and brain dysfunction, he calls people fanatics if they refuse to cook in aluminum pots. He believes that all raw foods aficionados want to escape their bodies because they like the feeling of lightness, not understanding that the high biophoton levels in raw foods may cause one to feel more connected to energy than to matter. And he insists that people with allergies should still try to eat allergenic foods because—remembering how isolated and bad *he* felt when he embraced diets requiring all his focus and time—he worries that allergic persons will harm *themselves* by becoming socially isolated. Plus, he admits, he doesn’t know how to cure allergies.

A Political Analysis. Those who benefit from the invention of “orthorexia” include agribusinesses (which manufacture fake food) and the medical-pharmaceutical cartel (which loves to assign negative labels to people who have normal, justified responses to abnormal situations). Although Bratman’s book was first published in 2001, orthorexia has been widely publicized recently. Are the fake food companies scared by the public’s demand for clean food?

Many products sold to North Americans by Nestlé, General Mills and other conglomerates contain dangerous chemicals, additives, and genetically modified ingredients. But virtually identical products created for export—to Europe, South America, Africa and Asia—are free of these contaminants. The products don’t contain junk because the overseas markets refuse to consume it. People outside the US would laugh if they received a diagnosis of orthorexia!

Meanwhile, the US establishment media refuses to publicize the dangers of what agribusiness tries to foist on the public as “food”—thus supporting attempts to pathologize those who protest the adulteration of our food supply. But despite the food industry’s marketing tactics, the healthy eating movement is gaining momentum. More Americans are trying to eat better, and efforts to persuade people to eat unsafe crap aren’t going well. In the United States, many multinational corporations and the Grocery Manufacturers Association spend millions of dollars trying to defeat proposed laws forbidding the planting of genetically modified crops and requiring that such “foods” be labeled. In some states, the bills were narrowly defeated by only a few hundred votes—and there were unusual delays before the votes were counted. Did someone use that extra time to tamper with the electronic voting machines?

Bratman compares orthorexia to alcoholism and heroin addiction. However, one valid point that he does make—that some people follow rigid diets instead of dealing with their emotions and paying attention to their actual nutritional needs—has been either inadvertently misinterpreted or deliberately distorted. (The sensationalist title of his book doesn’t help.) Now, someone is diagnosed as having orthorexia if she or he:

- ◆ Spends more than three hours a day thinking about healthy food. (What if the person is a professional bodybuilder, meal planner or dietician, or has cancer?)
- ◆ Continually limits the number of foods consumed. (What if the person has food allergies?)
- ◆ Abstains from foods formerly enjoyed. (What if the “formerly enjoyed” food had a negative impact on the person’s health?)
- ◆ Ensures cleanliness of the food by insisting that it be minimally handled and adequately washed. (What if the food is heavily sprayed produce? And does this mean that employees required to wear latex gloves while handling food are orthorexic?)
- ◆ Plans tomorrow’s menu today. (This can include cooks, busy parents organizing meals for their families, someone taking food out of the freezer for the next day—practically everyone.)
- ◆ Refuses to go to a restaurant that doesn’t serve clean or non-allergenic food, and thus becomes socially isolated. (Must “being social” always involve eating?)

Medicine also claims that people are orthorexic if they try to avoid foods containing or contaminated by:

- ◆ Pesticides and herbicides.
- ◆ Genetic modification.
- ◆ Artificial colors, flavors and preservatives.
- ◆ Heavy metals (like arsenic in rice or lead in chocolate).
- ◆ Unhealthy fats, sugars, or added salt.

Some health professionals recognize orthorexia as a mental disorder. The National Eating Disorders Association urges the afflicted to receive treatment—psychotherapy and selective serotonin reuptake inhibitor (SSRI) drugs. The most popular pharmaceuticals are Zoloft®, Prozac®, Luvox®, and Paxil®. The justification for prescribing these drugs is the supposed concern that restricting one’s diet “excessively” can cause anxiety, depression, guilt and shame.

Are most people who want to eat clean food mentally ill? Do they truly have orthorexia? Or is it that over 90% of the food supply in North America is tainted, and people want to be as healthy as possible by eating clean foods? The definition of orthorexia is so vague and all-encompassing that any health-minded individual can be termed neurotic. Mike Adams calls orthorexia “the healthy-eating disorder.” He suggests why the medical establishment attacks healthy eaters:

Increased mental and spiritual awareness is only possible while on a diet of living, natural foods. Eating junk foods keeps you dumbed down and easy to control. . . . It literally messes with your mind, numbing your senses with MSG, aspartame and yeast extract. People who subsist on junk foods are docile and quickly lose the ability to think for themselves. They go along with whatever they’re told by the TV or those in apparent positions of authority, never questioning their actions or what’s really happening in the world around them.

In contrast to that, people who eat health-enhancing natural foods—with all the [naturally occurring] medicinal nutrients still intact—begin to awaken their minds and spirits. Over time, they begin to question the reality around them and they pursue more enlightened explorations of topics like community, nature, ethics, philosophy and the big picture of things that are happening in the world. They become “aware. . . .”⁹²

Food allergies, diabetes, insulin resistance, hypoglycemia, celiac disease, Metabolic Syndrome, and other related conditions are escalating at unprecedented rates. The evidence is irrefutable: these conditions substantially improve, or are eliminated entirely, with a better diet. People who listen to their bodies and feel better by eating a certain way—even if that way seems rigid to those who follow a typical diet of junk—are mentally healthy. They love themselves enough to take good care of themselves.

Let us consider that yet another disease may be developing, one that affects medical personnel in particular. It’s called *in opus ad creare infirmitates*, which means “the need to create illnesses.”

We know that DNA vibrates several billion times a second, expanding and contracting like a coil. Studies have shown that each time a contraction occurs, one single biophoton (light particle) is produced, conveying information to other biophotons in the same body, and to biophotons in other bodies. All of the biophotons that are emitted surround the body in a highly structured field.

“The more light a food is able to store,” writes osteopath Joseph Mercola, “the more nutritious it is. Naturally grown fresh vegetables, for example, and sun-ripened fruits, are rich in light energy. The capacity to store biophotons is a measure of the quality of your food.”¹⁴³ Most raw foodists say they feel not only much lighter physically as a result of eating raw, but also more spiritually connected. This is undoubtedly a direct result of the light quotient that their bodies are receiving.

Flexible raw foodists may eat fermented dairy and pastured eggs, but the most vocal proponents of a raw diet tend to be strict vegans. The diet focuses on uncooked and fermented fruits and vegetables, and soaked or sprouted grains, nuts and seeds. However, the metabolic needs and relatively sedentary lifestyle of many people make it difficult for them to handle high-carbohydrate nuts and grains without adding at least some animal protein to their diets. A lesser known raw foods protocol is the so-called Paleolithic or Primal diet. Beef is either eaten raw, or slowly dehydrated into jerky at minimal heat to preserve the enzymes. Fish is “cured” with lemon juice and salt—the equivalent of slow cooking without heat, which does not destroy the enzymes. Perhaps people would want to eat more raw foods if they were encouraged to substitute meat and fish (even if cooked) for some of the recommended grains, nuts and seeds. As for the dangerous parasites in some raw meats, freezing is an acceptable alternative to heating. Freezing beef—and even fish and pork, especially susceptible to parasites—for three weeks, and then marinating these meats in an acidic medium such as raw apple cider vinegar or citrus juice, kills the parasites.

There are many reasons for eating a raw (and vegan) diet. For some, this type of eating makes the difference between remaining ill and becoming well. However, a raw vegan diet is not for everyone. As Annemarie Colbin points out, most people who live in cold climates need the heat that cooked food provides. And those who perform heavy manual labor, work with computers, or spend lots of time under fluorescent lights, need the slow steady energy from cooked foods as opposed to the quick, but short-lived, bursts of high energy generated by raw foods.

Cooking does have its place. Many foods are relatively unusable unless they are altered in some way. For instance, even with rigorous chewing, humans cannot digest the

tough cellulose of many vegetables, such as kale, potatoes and carrots. That is why many vegetables require at least a minimal amount of steaming. Cooking allows the vitamins and other nutrients in many vegetables to be assimilated. It’s worth losing enzymes and some nutrients through cooking if it makes the difference between eating a vegetable and not eating it at all. Vegetables can always be juiced to obtain the valuable nutrients.

The potent energy in raw foods is probably the most useful for recovering the strength and vitality that are lost due to illness. “Mono” diets are chiefly designed to manage extreme health issues. Once a condition is eliminated, continuing what was originally a corrective diet may create another imbalance or even illness. You don’t have to adhere to a 100% raw diet in order to benefit from these vital, living foods. Consider eating at least some living foods every day as part of your overall nutritional program. One of my favorite raw diet books, with tasty recipes and lots of thought-provoking information, is *Hooked on Raw*, by Rhio.

Cookware

With all this focus on food, it’s easy to forget about the pots we use. But cookware can make a huge difference to our health.

Aluminum used to be one of the most common materials used for cookware. But it’s a toxic metal, poisonous to the body in any form. Tomatoes, lemons, vinegar, and other acidic foods will leach aluminum from a pot. High levels of aluminum are found in the brains of people with Alzheimer’s and other diseases. Keep in mind that the use of aluminum foil can produce the same effects.

Aluminum pots and pans are less common now, but so-called non-stick Teflon[®] cookware has become popular. This coating, created by the DuPont company, contains PFOA, short for *perfluorooctanoic acid*. According to a statement by the United States Environmental Protection Agency,

PFOA . . . [sometimes called “C8,” is] a synthetic . . . chemical that does not occur naturally in the environment. Companies use PFOA to make fluoropolymers, substances with special properties that have thousands of important manufacturing and industrial applications. Consumer products made with fluoropolymers include non-stick cookware.¹⁴⁴

Another fluoropolymer is PTFE, short for *polytetrafluoroethylene* (also spelled *polytetraflourethylene*). In discussions about Teflon[®], the acronyms “PTFE” and “PFOA” are sometimes used interchangeably.

Fluoropolymer resins were developed in 1938 by scientists working for DuPont, environmental consultant Roberta C. Barbalace reports:

This new polymer seemed almost indestructible and its qualities promised to make it profitable if they could just find the right market. It was patented in 1944 and used first to line equipment used in the enrichment process of U-235 uranium hexafluoride gas for the Manhattan Project [the building of atomic bombs by the United States] during WW II. DuPont reserved its entire output for government use for the duration of the war with about two-thirds of it being used for the Manhattan Project.

When the war was over, DuPont had to find a new use for its polymer. In 1953, Teflon® was marketed to commercial users. . . . Before long . . . most of the industrialized world was cooking with Teflon®-lined pans. Teflon® products have been made from a variety of polymers.¹⁴⁵

DuPont's polymers were used in semiconductors, wire insulation and gaskets; and as coatings for clothes, carpeting, furniture and non-stick cookware—because, as the manufacturer states, they resist high temperatures, chemical reactions, corrosion, and cracking due to stress.

Non-stick coating on cookware is a really good idea. The problem is, the coating begins to break down and emit fumes when it's exposed to even moderate heat. Reviews of health records of workers exposed to the chemical, as well as animal studies, show numerous health risks associated with PFOA. Among them are:

- ◆ Chills and headache.
- ◆ Fever between 100° and 104°F (about 37.8° to 40°C).
- ◆ Prostate toxicity, tumors and cancer.
- ◆ Toxicity and impairment of the brain, kidneys, liver and thymus.
- ◆ Respiratory problems, including difficulty breathing, tightness of chest, coughing, sore throat, fluid in the lungs, and death by suffocation.
- ◆ Changes in size of the pituitary gland (which controls metabolism, growth and reproduction) *at any amounts*.
- ◆ Birth defects and death.

The dangers of Teflon® became well publicized when a 1995 article by Joanie Doss appeared in *The Alaska Club Bird Newsletter* and was then circulated on the Internet. Doss, a professional bird trainer, began researching the

compound after her beloved parrots died in her kitchen while she was cooking in non-stick pots. Compared to humans, birds are tiny and have extra-sensitive respiratory tracts; so they react much sooner to toxic air. “In 1951,” Doss wrote, “the first case of human suffering from tetrafluoroethylene problems was reported. It produces flu like symptoms in humans. The tetrafluoroethylene lingers long after the product has been removed.”¹⁴⁶

At what temperature does Teflon® break down? DuPont's own website states that the coating withstands up to about 500°F or 260°C (so why are consumers advised to use only low or moderate heat?), and that the coating starts decomposing only if temperatures reach above 600°F (316°C)—at which point, it can emit fumes that cause a flu-like condition (but it's temporary!).

The Environmental Working Group commissioned its own studies and reached very different conclusions.

A generic non-stick frying pan preheated on a conventional, electric stovetop burner reached 736°F [391°C] in three minutes and 20 seconds, with temperatures still rising when the tests were terminated. A Teflon® pan reached 721°F [383°C] in just five minutes under the same test conditions, as measured by a commercially available infrared thermometer. DuPont studies show that the Teflon® offgases toxic particulates at 446°F [230°C]. At 680°F [360°C] Teflon® pans release at least six toxic gases, including two carcinogens, two global pollutants, and MFA [monofluoroacetic acid], a chemical lethal to humans at low doses. At temperatures that DuPont scientists claim are reached on stovetop drip pans (1,000°F) [537.8°C], non-stick coatings break down to a chemical warfare agent known as PFIB [perfluoroisobutene], and a chemical analog of the WW II nerve gas phosgene.¹⁴⁷

Telling cooks to use Teflon® cookware according to ridiculously strict and impractical guidelines indicates a failure to take responsibility for making unsafe pans. Not many cooks will apply a thermometer to the bottom of their pans to measure the temperature. Even if the pans are used within the recommended temperature limits, as soon as the cookware becomes scratched its coating peels and disperses into food. Teflon® is the most widely known brand of non-stick cookware, but there are many others including Duracote™, Excalibur®, Fluron®, Greblon®, Silverstone®, Supra®, T-Fal®, Resistal®, and Xylon®.

An Internet search conducted in March 2008, using the words “DuPont,” “lawsuit,” and “Teflon®” together, yielded almost 20,000 findings. Here are some highlights:

showing that daily ingestion of echinacea did indeed increase the activity level of phagocytes (white blood cells that destroy pathogens and foreign particles). After five days, the test doses were stopped and blood samples were taken immediately. Phagocyte levels remained high for about two days after the echinacea was withdrawn, but then they returned to their former levels. Had the experimenters continued to monitor the blood levels of the test subjects, they would have seen the immune-stimulation effects subside—and presented this data as part of the experiment. The fact that the high white blood cell count remained for two days after the echinacea was withdrawn is a testimony to the herb's effectiveness.

Most tests on echinacea are poorly designed. Sometimes plants with different chemical constituents are used, and treated as comparable when they're not. Some tests use extracts that are diluted but shouldn't be. Also, most research doesn't use oral doses, but injections—which isn't how the herb is taken anywhere in the world. One much-quoted study used healthy volunteers whose immune function was already strong. No increase of white blood cells was noted, so this gave the impression that echinacea doesn't work! Were such "mistakes" deliberately made? Very likely, if the studies were funded by pharmaceutical companies.

For centuries, the Native Americans used echinacea for infections because of its ability to support optimal white blood cell function as well as inhibit the mobility of bacteria. The herb has been used (and can be used) with no ill effects, many times daily during illness, and fewer times a day for maintenance. Throughout the years when I took various brands of echinacea tincture, sometimes I'd notice an improvement in my condition, but other times I would not. It was only after I took a class with phytotherapist Kerry Bone that I learned the key to the herb's potency. Echinacea extract causes the entire mouth to tingle and the tongue to feel somewhat numb. If there's no tingle, the formula's dead.

Herbal preparations should be living, like foods. If you don't see results, you may be using the wrong remedy, or using it incorrectly. Or, the product may not have been made in a way that preserved the effects of the plant. Ask questions about the company's research and potency evaluation facilities. And use herbs with a track record. If the herb is newly discovered, or has been used only recently for a specific purpose, read the scientific literature or talk to someone you trust who has done or read the research.

Just as with foods, certain herbs might be wonderful for someone else but not for you. And different herbs can react with each other—sometimes in beneficial ways, sometimes not. For minor conditions, it might be appropriate to take one or just a few herbs, or a time-tested combination formula from a company with a track record. However, for a serious or chronic condition, see a qualified herbologist who can design a protocol for your unique body chemistry and situation.

"Herbal medicine is not an anachronism practiced by ignorant people. . . . A form of herbal medicine is practiced in every culture and in every country of the world, be it industrialized or not," write Bone and Mills. "Something deep within us recognizes that there is healing power in the plant kingdom which, after all, is the nourishment of all animal life."¹⁵⁷ The idea that pharmacology can replace plants is not only arrogant, but extremely disrespectful to indigenous cultures. Why does modern medicine believe that it can improve, in one century, what native peoples have been practicing effectively for thousands of years?

Vitamins Prevent Chronic Disease

Most people do not consume an optimal amount of all vitamins by diet alone. Pending strong evidence of effectiveness from randomized trials, it appears prudent for all adults to take vitamin supplements.

—*Journal of the
American Medical Association*
June 19, 2002

NUTRITIONAL SUPPLEMENTS

The nutritional supplements industry has grown rapidly in the last few decades as more people have become health conscious, despite the persistence of negative myths about supplements. The FDA largely claims that we obtain adequate amounts of vitamins and minerals from the foods we eat, yet its suggestions for our "minimum daily requirements" are based on the needs of rats, not humans. Moreover, the medical establishment periodically issues warnings about some vitamins and minerals as though they were drugs. Finally, the public is misled to believe that all nutritional supplements are essentially the same.

As a rule, the body's first focus is on maintaining reproductive ability and short-term health. Only if there are enough nutrients will it then choose cellular repair. Long term diseases, which involve inflammation and oxidative stress, take a long time to develop. They also indicate chronic nutrient deficiencies.

The chronic illness plaguing us worldwide indicates nutrient starvation. Therefore, in this section I will explain what to look for when buying nutritional supplements. First, here's a very brief overview of some basic nutrients.

Basic Nutrients

Vitamins

The word *vitamin* used to be spelled “vitamine.” It comes from two Latin words: *vita* which means “life,” and *amine* to signify an amino acid—because when vitamins were first discovered, they were mistakenly thought to contain amino acids. (Amino acids are the building blocks of protein.) Vitamins are now considered to be co-enzymes because they naturally combine with other substances (such as peptides) to catalyze them to do their jobs. Vital for health, vitamins generally cannot be synthesized by the body and must be obtained from foods.

Minerals

Due to the depletion of our soil, people tend to suffer more from mineral than vitamin deficiencies (except for Vitamin C, discussed shortly). This is especially true of boron, chromium, selenium, and other trace minerals.

The **Water** section at the beginning of this chapter discusses minerals in depth; but a few points are worth reiterating. Mineral salts (*electrolytes*), in proper ratio on either side of a cell membrane, act together like miniature batteries. They regulate the transport of all nutrients into the cell. If the body’s electrical signals are muffled or incomplete, cell functions suffer.

Minerals must always accompany vitamins and other minerals to help maintain systemic balance. One example is calcium, which requires the mineral magnesium to help it across the cell membranes of bones. If not enough magnesium is present, the excess calcium doesn’t reach the bones and instead collects in the soft tissues, causing a type of arthritis. Another mineral, boron, helps with calcium absorption. Vitamin D3 (discussed later as really being a hormone) is also essential for calcium absorption because it promotes the mineralization of bones and prevents them from becoming brittle and deformed. As for calcium, different people require different forms of it (calcium can bind to various elements). Just this example shows the degree of complexity possible with nutrient interactions.

Enzymes

Enzymes catalyze all types of chemical reactions in the body without being destroyed themselves. Although comprised chiefly of amino acids, an enzyme may also contain a single molecule of a mineral (such as copper, iron or zinc) in order to function. “In the 1930’s,” write Sally Fallon and Mary Enig, “when enzymes first came to the attention of biochemists, some 80 were identified; today, over 5,000 have been discovered.”¹⁵⁸ Medical doctor and enzyme expert Edward Howell wrote that what has been

called “vitality, vital force, vital energy, . . . life energy, life and life force” is actually enzyme activity.¹⁵⁹

All enzymatic functions relate to metabolic functions, which are either anabolic or catabolic. During an *anabolic* process, ingredients *combine* to form more complex substances, as in the buildup of muscle tissue. During a *catabolic* process, complex materials *break down* into simpler ones, as when foods are reduced to more basic components. Chiropractor and nutritionist Anthony Cichoke classifies enzymes into six groups, based on the substances they affect and the types of biochemical reactions they induce. Fallon and Enig have a more practical, usable system for the layperson:

Enzymes fall into one of three major classifications.

The largest is the metabolic enzymes, which play a role in all bodily processes including breathing, talking, moving, thinking, behavior and maintenance of the immune system. A subset of these metabolic enzymes acts to neutralize poisons and carcinogens, such as pollutants, DDT and tobacco smoke, changing them into less toxic forms, which the body can then eliminate.

The second category is the digestive enzymes, of which there are about 22 in number. Most of these are manufactured by the pancreas. They are secreted by glands in the duodenum (the upper part of the small intestine) and work to break down the bulk of partially digested food leaving the stomach.

The enzymes we need to consider when planning our diets are the third category, the food enzymes. These are present in raw foods, and they initiate the process of digestion in the mouth and stomach. Food enzymes include proteases for digesting protein, lipases for digesting fats and amylases for digesting carbohydrates. Amylases in saliva contribute to the digestion of carbohydrates while they are being chewed, and all enzymes found in food continue this process while it is mixed and churned by contractions in the stomach. The glands in the stomach secrete hydrochloric acid and pepsinogen, which initiate the process of protein digestion, as well as the intrinsic factor needed for vitamin B12 absorption; but the various enzymes needed for complete digestion of our food are not secreted until further down line, in the small intestine.¹⁶⁰

Enzymes already present in sprouts and in raw and fermented foods help digest those foods. They’re destroyed by heat. Holistic practitioners advise people

who eat cooked food, are ill, or are over 40 years old, to supplement with digestive enzymes.

Functionally, enzymes can be interchangeable. This is why systemic enzymes used for inflammation should be taken on an empty stomach. Otherwise, the activity of the enzymes will be used to digest food instead of scavenge the irritating substances in the bloodstream and tissues that cause the inflammation.

Enzymes are so important to life processes that many practitioners consider supplements mandatory for those with chronic or life-threatening illness. Cichoke writes:

Enzymes can aid digestion, dissolve blood clots, fight back pain, decrease swelling, speed up healing, fight wrinkles, clean surfaces of dirty wounds, help in delicate surgery, ease hindered breathing, stimulate the immune system, and help fight cancer and HIV/AIDS and other viruses. In other words, enzymes can do an awful lot.¹⁶¹

Is it possible to take too many enzymes? “There appear to be no side effects of long-term duration when taking oral enzymes,”¹⁶² Cichoke advises. However, people with clotting disorders, and who are about to undergo surgery, should avoid taking proteolytic (protein-digesting) enzymes, which could thin the blood excessively.

Enzymes are extracted from plants and animal organs. Because they’re more difficult to make than even food-based vitamin supplements, they cost more. In Germany and other parts of Europe, enzymes are the most popular over-the-counter product for relief of pain and inflammation. They work well and cause no “side” effects.

Some enzymes are used to break apart *biofilm*—the sticky, hard, goeey coating secreted by colonies of pathogens to protect themselves from destruction. Most pharmaceutical antibiotics and natural antimicrobials cannot eliminate pathogens hiding in biofilm because the hard shield prevents direct contact. But once biofilm is dismantled, one layer at a time, the pathogens can be destroyed. Some effective enzymes to take for this purpose (on an empty stomach, of course) are serrapeptase, nattokinase, and lumbrokinase.

Essential Fatty Acids (EFAs)

The essential fatty acids Omega 3, 6, and 9 are named according to where the first double bond in their chemical structure is located from the omega end of the molecular chain. EFAs are vital for the development and maintenance of the brain and nervous system. They improve mood and memory, fight inflammation, and support heart health.

EFAs cannot be created by the body (except for a bit of Omega 9), so they must be obtained from food. The relatively unknown Omega 7 is considered “non-essential,”

but it’s also used by the nerve tissue, skin and eyes, and helps burn abdominal fat.

Omega 3 supplements are sourced from either fatty fish (high on the food chain) or shrimp-like krill. Due to severe pollution in our oceans, the larger fish are loaded with mercury. The fish oils should be fresh, and molecularly distilled to remove all traces of heavy metals. The labels will indicate this. Omega 7s can be found in sea buckthorn oil (which causes diarrhea if consumed in excess), and in macadamia nuts and the nut oil (safe). Omega 6s are found in many foods, especially nuts and grains, and can cause inflammation. Most people consume too much Omega 6.

Amino Acids

Amino acids are the building blocks of protein. The body can produce many amino acids from other raw materials, except nine “essential” amino acids that must be obtained from food. Whether you eat animal products (which contain all of the essential amino acids), or foods from the grain or pea/bean/legume group (most of which contain fewer essential amino acids), the body dismantles these proteins into individual amino acids, and then reassembles them to build what it needs: muscle, fascia, skin, hair, enzymes, neurochemicals. The right individual amino acid supplements can safely replace dangerous pharmaceuticals that are taken to presumably balance the brain’s neurotransmitters (see *The Mood Cure* by Julia Ross).

Why We Need Supplements

Our nutrient-depleted soil creates deficiencies in our crops, and then in our bodies. As far back as June 1, 1936, a Mr. Fletcher spoke before the second session of the 74th Congress. His paper, reprinted by the US Government Printing Office in Washington, DC, was known as United States Senate Document #264. It read in part:

Do you know that most of us today are suffering from certain dangerous diet deficiencies which cannot be remedied until the depleted soils from which our foods come are brought into proper mineral balance? . . . Laboratory tests prove that the fruits, the vegetables, the grains, the eggs, and even the milk and the meats of today are not what they were a few generations ago. [They are]. . . now being raised on millions of acres of land that no longer contain enough of certain needed minerals, are starving us—no matter how much of them we eat! . . . A balanced and fully nourishing diet . . . must contain . . . a score of mineral salts. . . . 99% of the American people are deficient in these minerals, and that

a marked deficiency in any one or more of the important minerals actually results in disease. Any upset of the balance, any considerable lack of one or another element, however microscopic the body requirement may be, and we sicken, suffer, shorten our lives. . . .

[Charles Northen, MD] made an extensive study of the soil. . . . “Bear in mind,” says Dr. Northen, “that minerals are vital to human metabolism and health—and that no plant or animal can appropriate to itself any mineral which is not present in the soil upon which it feeds. . . . vitamins are complex chemical substances . . . indispensable to nutrition, and . . . [important] for the normal function of some special structure of the body. Disorder and disease result from any vitamin deficiency. It is not commonly realized, however, that . . . in the absence of minerals they [vitamins] have no function to perform. Lacking vitamins, the system can make some use of minerals, but lacking minerals, vitamins are useless. [Plus, the body, when denied minerals, absorbs toxic metals instead.] . . . Our foods vary enormously in value, and some of them aren’t worth eating. . . . For example, vegetation grown in one part of the country may assay 1,100 parts per billion of iodine, as against 20 in that grown elsewhere. . . . Some of our lands, even in a virgin state, never were well balanced in mineral content.”

We must rebuild our soils: Put back the minerals we have taken out. That sounds difficult but it isn’t. Neither is it expensive. Therein lies the short cut to better health and longer life. . . .¹⁶³

Not even a century ago, farmers planted many types of crops. Each plant extracted and returned different minerals to the soil. The soil was further enriched with natural fertilizers. With *monoculture* (single-crop agribusinesses), our soil became exhausted. Synthetic fertilizers were used, causing further imbalances.

There are many reasons to supplement.

Important Features of Supplements

Synthetic, Natural, and Food-Based

As with diet, nutritional supplementation is one of the most heatedly debated topics among health professionals and the aware public. Solid supplements are classified either in the “Synthetic Vitamins Camp” or the “Natural Vitamins Camp.” There are valid reasons to use both. First, however, let’s define some terms.

Synthetic vitamins are created in a laboratory. They are sometimes called “crystalline,” “USP,” or “pharmaceutical grade.” The crystalline powders come from a wide variety of sources (more on this in a moment), and each batch is as uniform as the last. Most of the ingredients may have been subjected to a lot of processing, which may or may not include high heat, chemical solvents, and metal salts that could contain aluminum and lead.

Not all natural vitamins are food-based—in fact, most of them aren’t. So-called natural vitamins are often subject to many different types of processing. The original source materials may have been plants; but they, too, have probably undergone a great deal of transformation. Due to this transformation, despite how they’re labeled by the manufacturers some people regard them as synthetic. At

Nutritional supplements fall into categories, although there can be considerable overlap in function among them.

- ◆ **Detoxification/Cleansing.** The body produces waste materials each day in the course of routine metabolism. Under normal conditions, the kidneys, liver and lymph work hard to eliminate these toxins and require adequate nutrients to do their jobs. When you’re experiencing physical or emotional stress, eating poorly, and/or fighting infection, the body has an even harder time eliminating toxins—which in turn creates more illness and degeneration.
- ◆ **Rebuilding and Maintaining the Body.** While under optimal conditions we need to replenish nutrients daily, our nutritional requirements escalate during illness. Eating organic food and drinking pure water are, of course, important. However, the depleted soil in which our food is grown, along with pollutants in the environment, increases our needs for nutrients even if we have a good diet. Vitamin, mineral and herbal supplements give the body what it needs so we can remain in good health even when we’re aging.
- ◆ **Direct Immune Support.** Immune cells that scavenge pathogens, foreign proteins and bodily wastes may not function well, especially during infection. An analysis of live blood under a darkfield microscope may reveal white blood cells that are sluggish or immobile from the excess waste. Sometimes there aren’t enough immune cells to do the job. Or they might not “remember” how to eliminate pathogens. Colostrum, proline-rich polypeptides, whey, herbs such as echinacea, and various vitamins, minerals and enzymes can all help support immunity.
- ◆ **Pathogen Removal.** Sometimes we need help to kill pathogens. A number of herbs and essential oils eliminate harmful microorganisms while nourishing the body.

Thorp's review of the literature showed that research subjects were quite comfortable with pure ozone of concentrations of up to 20 ppm (parts per million). However, when ozone was mixed with nitrogen compounds, levels of even just 5 ppm were intolerable. So, despite the well-researched scientific literature on ozone, most of the mainstream material on ozone is heavily flawed. What most people call "ozone" is the *contaminants* that *accompany* improperly created ozone. If cathode rays, radioactive emissions or high-voltage charge are present, and if the feed gas is mixed-gas air rather than oxygen, highly toxic nitrogen oxides and other compounds will be created along with the ozone. The pollutants surrounding ozone have nothing to do with the intrinsic qualities of ozone itself. Pure ozone is O₃. Obviously, if ozone contains contaminants or is combined with other compounds, it's no longer O₃, but something else. Ed McCabe comments: "Broadly saying 'ozone is toxic' is an uninformed opinion due to oversimplification. It's what you hear from the media, which usually only has time for 'one-liners.' . . . [If the ozone is] contaminated, the contaminants are the toxins, not the ozone used at proper levels!"¹⁸⁶

We can analogize misconceptions about ozone with leaving a bowl of beef stew out in the hot sun for many hours so it becomes contaminated with *Bacillus botulinum*, eating it, contracting food poisoning, and then deciding that stew is bad for you—instead of recognizing that you got sick because you ate spoiled food. Neither the

mainstream media nor government agencies seem willing to correct the misconceptions. Toxic contaminants in ozone simply highlight the need for clean sources of power, and for the manufacture of high quality ozone equipment that does not produce harmful chemicals. To save money, some manufacturers of ozone air cleaners use inferior components, which produce toxic compounds along with the ozone. Ethical manufacturers use better components, ensuring that pure ozone is produced.

Ozone therapy can be regarded as an electrotherapy, and must be dispensed correctly. The concentration of the gas must be high enough to kill aerobic pathogens without over-saturating the cells to the point where it damages them (see Sidebar, "Too Much of a Good Thing: The Immunosuppressive Effects of Ozone"). Likewise, if ozone is inhaled (discussed shortly), it must be done correctly.

How Ozone Works

How does ozone scavenge and decontaminate? In *Medical Applications of Ozone*, one scientist defines ozone as an "oxygen atom in the body on a rapid transit"¹⁸⁷—whether in the body, water, or air. The oxygen on rapid transit is *singlet oxygen*, the lone O₁ atom that breaks off from the O₃ cluster and leaves the O₂ (oxygen) behind. The power of ozone lies not in the O₂, but in the O₁ atom. Dr. Pressman has stated that emphasizing the chemistry of ozone is misleading *because the therapy's effectiveness lies in its electrical nature. Ozone is the delivery system for the*

Too Much of a Good Thing: The Immunosuppressive Effects of Ozone

Ozone must be applied to the body in the right concentrations. The gas is a carrier of electricity in the form of O₁ atoms. The higher the concentration, the more electricity (electrons) are delivered. If too many electrons pass through a wire, you overload a circuit and blow a fuse. The body responds similarly.

Some information on ozone concentrations came from the research of Professor Bocci at the University of Siena, Italy. He took blood out of subjects, injected it with ozone, and returned the blood to the body. Then he measured the subjects' production of gamma interferon and interleukin 2. When plotted on a graph, the production of these immune substances showed a bell curve. The highest part of the curve lies at about 50 µg/ml, or micrograms of ozone per milliliter of blood. Below that concentration, it is less than optimal, disappearing at about 20 µg/ml. And above 50 µg/ml, it once again falls off, until about 70 µg/ml the response is nil.

More information came from the research of Dr. Jon Greenberg of the Kief Clinic. He experimented with various concentrations of ozone on blood *in vitro*, to try to determine the maximum concentration that should be used. At 90 µg/ml, there was definite crimping and damage seen in the red blood cells. He recommended that medical therapy be limited to no more than 80 µg/ml.

Dr. F. Sweet and colleagues also did work on ozone concentrations, this time *in vitro* with cancer cells and normal tissue. They found that cancer cells were inhibited by ozone in a concentration-dependent manner. Normal cells were undamaged until a concentration of 70 µg/ml was reached, beyond which their growth was suppressed.

It's clear that there is an upper limit on beneficial concentration for internal use, as well as a lower concentration threshold for ozone's effectiveness. All generators sold for medical use should reflect these established limits—with an output set at a single safe level, or controls to regulate the ozone flow. External use (limb bagging or funneling) can have higher limits, but care must be taken there as well.

O_1 electron. If the oxygen gas were doing the work, the O_2 that's routinely administered in hospitals would be sufficient to combat severe infections, and it's not. The electrical charge that ozone carries is so strong, it can literally blast a hole through the outer wall of a pathogen, killing even the ones that are aerobic (living on oxygen). In ozone therapy, O_1 is the safe and effective carrier of electricity into the body.

Among other functions, oxygen burns glucose. If there's not enough oxygen in the system, the glucose is incompletely burned, resulting in considerable metabolic debris. But ozone's high oxidative energy allows it to cleanly burn fuel as well as neutralize all sorts of toxins.

To the misinformed, ozone (singlet oxygen) might sound like a free radical. *Free radicals* are wild, unanchored atoms that try to stabilize themselves by stealing electrons from other atoms, thus causing severe tissue damage. But, unlike ozone, free radicals destroy healthy cells. Why doesn't ozone destroy healthy tissue along with pathogens and toxins? As mentioned earlier in the discussion on hydrogen peroxide, normal cells produce generous quantities of enzymes (including catalase and peroxidase) to protect cell membranes from oxidative damage. Damaged cells do not. Therefore, ozone (in the correct amounts) scavenges only unhealthy tissue and leaves healthy tissue intact. Even if healthy tissue is too saturated with toxins to produce sufficient protective enzymes, ozone is still beneficial. Oxidizing whatever toxins it touches, it will allow those cells to function again. Thus, properly administered ozone targets only substances that impair systemic function.

Ozone is also noted for normalizing immune function. It helps the body produce monocytes and lymphocytes (immune cells), as well as immunity biochemicals such as interleukin and interferon. If the immune response is overactive, ozone will calm it; but if the immune response is sluggish, ozone will raise its activity. Ozone also increases the activity of the mitochondria, small fuel-burning units of the cell. An abstract from a Russian study, "Influence of intravenous ozone treatment on the level of different specificity antibodies," states in part:

Medical ozone is the universal stimulator which participates in intracellular biochemical processes. Treatment with intravenous ozone was studied in 35 women [some of them pregnant], . . . three with anti-HLA antibodies, . . . three with anti-sperm antibodies, and seven with antiviral antibodies (*Herpes 1, 2 and CMV*). . . . Ozone is effective for . . . antibody levels in blood. *Medical ozone has direct antiviral activity which induces long term remission and in some cases total elimination of virus from blood. Generally, ozone is a modulator of*

*the immune system, stimulating . . . cell immunity. . . . Immune regulation . . . in pregnant women was increased. [emphasis added]*¹⁸⁸

Kurt Donsbach, DC, ND, PhD, summarizes that oxygen therapies:

- ◆ Increase tissue oxygenation, which brings about improvement in metabolic rate.
- ◆ Stimulate production of white blood cells, which are necessary to fight infection.
- ◆ Decrease blood carbon monoxide load, which frees hemoglobin to carry oxygen.
- ◆ Increase hemoglobin disassociation [the ability of hemoglobin in the red blood cells to let go of the oxygen they are carrying], thus increasing delivery of oxygen from blood to cells.
- ◆ Increase red blood cell flexibility, which allows them to squeeze through the smallest blood vessels more easily.
- ◆ [Break down] and degrade petrochemicals.
- ◆ [Inhibit] the growth of new tissues such as tumors.
- ◆ Increase the production of interferon and tumor necrosis factor, used to fight infections and cancer.
- ◆ Increase the efficiency of the antioxidant enzyme system, which scavenges excess free radicals.¹⁸⁹

Ozonated Drinking Water

Over 3,300 European cities treat their municipal drinking water with ozone. It's difficult to obtain figures for the US, but some cities that now ozonate their water supply include New York, Seattle, Dallas, Tampa, and Los Angeles. Ozone's half life of 12 minutes means that even if you're lucky enough to live in an area that ozonates its municipal water supply, you won't receive the additional benefits of ozone's pathogen and toxin neutralization inside your own body—or enjoy ozone's heightened cell and immune function—unless you add ozone to your water just before drinking it.

The best way to disperse ozone into drinking water is through a stone bubbler, commonly used to oxygenate aquariums. This can be bought at a pet store. Bubble a glass of water for about 10 minutes to saturate the ozone levels. A gallon of water requires about 45 minutes. If ozonated water is kept in the refrigerator at 40°F (7.2°C), the ozone will remain intact in the water for three to four days. Frozen in a plastic container, the water can be stored for several months. Filter the water first; otherwise, the ozone will be used up oxidizing contaminants in the drinking water, instead of doing its work inside your body.

In the United States, colloidal silver is not approved for medical use. Companies that sell CS or the equipment to make it are forbidden by the FDA to tell the truth about colloidal silver's healing properties. Nevertheless, this has not stopped pharmaceutical companies from producing *other* silver products that *are* approved for medical purposes. These products include silver gels and creams (such as the widely used silver sulfadiazine) for cuts, burns and wounds; silver coated bandages, extensively and successfully used in hospital burn units; and various other silver compounds. The existence of these products makes it difficult for government agencies to continue to deny the health benefits of silver.

Disabling Pathogens

Silver is a broad-spectrum, safe, effective substitute for allopathic antibiotics. Research conducted since the 1970s has shown that silver:

- ◆ Deactivates the enzymes that microorganisms need for respiration. Because pathogens are suffocated rather than poisoned, resistant strains are unlikely to form (which happens with allopathic antibiotics).
- ◆ Oxidizes the pathogen in ways similar to those of hydrogen peroxide or ozone.
- ◆ Binds to the cell walls of bacteria, which prevents them from functioning properly and ultimately causes their death.
- ◆ Replaces sulfur and other substances in the cell wall that pathogens need.
- ◆ Repairs broken DNA of a virus—thus rendering it dysfunctional—because a virus, by definition, can only function inside a host if its DNA is incomplete.
- ◆ Weakens biofilms created by some pathogens such as *Staphylococcus aureus*. (See Chapter 5 for more information on biofilms.)

Here is just a small sample of the scientific proof that silver destroys bacteria, viruses, and many fungi—in fact, virtually any single-celled pathogen within minutes. In 1976, an article was published called “Antifungal Properties of Electrically Generated Metallic Ions.”²⁰² A 1978 *Science Digest* article reported that silver kills over 650 pathogenic microbes, and cited doctors who had developed silver compounds (and received the FDA's endorsement).²⁰³ A 2005 study showed that a silver ion solution destroyed *E. coli* by “readily” entering its interior.²⁰⁴ And in 2006, the *American Journal of Nursing* stated:

Silver is a broad-spectrum agent effective against a large number of Gram-positive and Gram-negative microorganisms, many aerobes [living in the presence of oxygen] and anaerobes [living in the absence of oxygen], and several antibiotic-resistant strains such as methicillin-resistant *Staphylococcus aureus* and vancomycin-resistant enterococci.²⁰⁵

The authors of a 2008 study, “Antibacterial Activity and Mechanism of Action of the Silver Ion in *Staphylococcus aureus* and *Escherichia coli*,” declared bluntly that there was a “significant reduction” in pathogens after a 90-minute treatment from “a silver ion solution that was electrically generated”—in other words, colloidal silver. “Transmission electron microscopy showed considerable changes in the bacterial cell membranes upon silver ion treatment.”²⁰⁶

Despite silver's versatility in killing bacteria and viruses, it cannot kill complex, multi-celled worms and similarly large parasites. However, it can kill the bacteria and viruses living *inside* the parasites. And although CS seems to help prevent viral infection, it may be less effective once an infection has become established. However, in such cases CS does prevent secondary infections from bacteria. It even helps improve the performance of pharmaceutical antibiotics. This makes it especially helpful for stubborn, drug-resistant infections.

Colloidal silver affects single-celled microorganisms *as long as it can physically touch them*. So, even though CS cannot disable pathogens in solids such as bone and feces, it *can* easily disarm them in liquids such as water, blood, urine, and lymph. If you take CS on an empty stomach, it will directly contact any *Helicobacter pylori* that's present (*H. pylori* is responsible for ulcers and stomach cancer). And CS traveling directly to a relatively empty gut, with no stool to block its passage, will kill unwanted microorganisms there that cause food poisoning and dysentery, such as *Giardia*. Similarly, in the laboratory, silver cannot affect pathogens in a solid, gel-like nutrient agar, but it *will* affect the ones living in a nutrient *broth*.

Just a few conditions that have been partially or completely eradicated by CS are gastrointestinal disorders (including diverticulitis and salmonella), hepatitis and other liver conditions, Lyme disease, malaria, pancreatitis, respiratory problems such as emphysema, *Herpes* virus ailments, the SARS virus, and Ebola.

Researchers at the University of Texas and Mexico University began using silver to kill *Staphylococcus aureus*. The *Journal of Nanotechnology* reported that silver particles killed 100% of the HIV-1 virus (incubated at 98.6°F or 37°C) within 3 hours—and that silver was expected to kill every other virus as well! The authors wrote, “The strong toxicity that silver exhibits in various

chemical forms to a wide range of microorganisms is very well known. . . . Silver nanoparticles interact with the HIV-1 virus via preferential binding to the gp120 glycoprotein knobs. Due to this interaction, silver nanoparticles inhibit the virus from binding to host cells.”²⁰⁷ (The scientists called the minuscule units of silver “nanoparticles”; but the silver particles ranged in size from one to ten nanometers, which are the sizes of silver *ions*, one of the two particle types in colloidal silver. Therefore, this “nanoparticle” label appears to have been incorrect.)

I’ll tell you shortly how you can make your own silver solution; but first, I want to discuss how silver can eradicate cancer, and its effects on immune response.

Enhancing Immunity

For a decade or so, the chemists, holistic health aficionados, and adventurous do-it-yourselfers in the global grassroots colloidal silver community enthusiastically focused on the pathogen-killing power of CS. Then they discovered that in addition to killing one-celled microorganisms, silver supports immune function.

Newer research, published in the European journal *ChemMedChem*,²⁰⁸ shows that silver modifies the effects of *cytokines*, small proteins that are involved in all types of immune and inflammatory responses. While small amounts of cytokines helpfully bring white blood cells to an injured area of the body, too many cytokines cause inflammation. Silver reduces the inflammatory response and increases the rate of healing. Inflammation both contributes to, and directly causes, many diseases and degenerative conditions; so using silver for healing shows great promise. If the immune response is more efficient, viruses can be eliminated even more quickly. (Note that although the article refers to silver “nanoparticles,” it states that their measurements are under 100 nanometers. Again, this is the size of *ionic* silver, so perhaps the researchers were lax in the term they used. Many people incorrectly refer to ions as “nano.” See Insert on page 405, “Saying No to Nano.”)

People who are seriously ill may be deficient in silver. This trace mineral is apparently an essential micro-nutrient.

Normalizing Cancerous Tissues

Silver’s immune supporting function is directly related to its ability to reverse the progression of cancer cells. This was discovered over 30 years ago by medical doctor Robert O. Becker. A highly credentialed clinician, professor and researcher, Becker taught at Upstate Medical Center in Syracuse, New York; was Director of

Orthopedic Surgery at Syracuse’s Veterans Administration Hospital; and wrote two books on electromedicine.

Dr. Becker began working with silver in 1971. He was trying to ascertain whether minute amounts of electrical current could cause rats to regenerate limbs, hoping that this would prove useful in healing broken bones in humans. Becker used silver for the electrodes instead of other metals because he believed that silver was not chemically reactive with the body’s tissues, and that it would also transmit current more efficiently.

After numerous tests, Becker concluded that the silver ions produced by the current, along with the current itself, were responsible for stimulating the normal growth of human tissue (including the regeneration of bone and skin). The silver ions reduced healing time by 50%. A paper published by Becker, Berger and colleagues in 1976, “Electrically Generated Silver Ions: Quantitative Effects on Bacterial and Mammalian Cells,”²⁰⁹ described how, compared to an inferior silver *compound* (silver sulfadiazine), silver *ions* inhibited the proliferation of bacteria between 10 to 100 times more effectively—and without any negative effects on normal mammalian cells.

Becker also discovered something else: When silver was injected, *it caused cancerous tissue to become normal again.*

As [ubiquitous] human fibroblast cells . . . were exposed to the electrically generated silver ions, they dedifferentiated. They were then able to multiply at a great rate, producing large numbers of primitive, embryonic cells in the wound even in patients over 50 years of age. These “uncommitted” cells were then able to differentiate into whatever cell types were needed to heal the wound. *So what we were in fact doing was turning on regeneration in human tissues.* . . .

This circuitous pathway led us back to one of our original aims, the control of cancer growth. If the electrically generated silver ion dedifferentiated normal human fibroblast cells, would it also dedifferentiate human cancer cells? . . . We did find that some human cancer cells in culture appeared to dedifferentiate when exposed to these silver ions. . . . It is important to realize that this is not simply an electrical effect, but the result of the *combined action of the electrical voltage and the electrically generated silver ions.* [emphasis added]²¹⁰

Most laypeople, and even doctors, have not heard of Dr. Becker. As his experiments became more promising and known, his research funding was abruptly withdrawn.

In addition to being ingested and applied externally in poultices, CS can be injected intra-muscularly or

Does heating CS cause it to precipitate out of solution? Perhaps a bit, but there's still enough small-particle silver present to help with healing. The heated, low-concentration silver solution may add back some of the trace amounts of silver that would have been in the food had it been grown on completely fertile soil.

Incidentally, sometimes when I take large amounts of CS to fight an infection, I add alkaline minerals to it just before drinking it—this way, the silver won't precipitate out of solution. Distilled water tends to be acidic, and makes the silver solution acidic. For many people, drinking acidic water is not beneficial. Willard's Water and other alkalizing preparations appear to alkalize the fluid without destabilizing the silver. (See the **Water** section at the beginning of this chapter for more information on distillation, pH, minerals, and Willard's Water.)

Inhalation Therapy

Colloidal silver has been successfully used in treating respiratory ailments when inhaled through a medical nebulizer. A nebulizer is compressor that delivers the CS in ultra-fine droplets of mist. It's either held in the hand or delivers the silver droplets through a tube that's attached to a face mask or breathing apparatus that the user wears. The nebulizer should produce droplets of 2 to 5 microns in size. The effectiveness of the silver is often improved with the addition of very small amounts of essential oils such as lemon, oregano, tea tree, eucalyptus and lavender, which have antimicrobial properties. Sometimes, people add a pinch of MSM (methylsulphonylmethane).

External Use

Colloidal silver is simple to use. To clean and sterilize wounds, simply saturate a bandage or clean cloth and apply it to the skin, making sure to keep it wet. Healing will be rapid, with no pain or scarring.

For virulent or life-threatening diseases such as malaria or HIV, the *concentration* (strength) of CS should not be less than 12 ppm. However, more than 12 ppm is not necessary. Remember, a homemade solution will not yield much more than 25 ppm or more. If you buy any silver product over 25 ppm, it's almost certainly a silver *compound*, and will not give you the benefits of CS.

It's difficult to "overdose" on colloidal silver. The amount you take should be determined by observed effect and the level of discomfort caused by the Herx symptoms. Two cups per day, divided into several servings throughout the day, is a reasonable amount. Those with cancer, Lyme, HIV, Ebola, or similar virulent infections will benefit by taking more, at least one gallon daily (again, divided into smaller amounts throughout the day).

Every Home Should Have It

To summarize, electrolytically isolated silver (EIS), or what's commonly called "colloidal" silver:

- ◆ Causes single-celled pathogens to die, almost instantly, by disabling the enzyme they need for respiration.
- ◆ Is effective for serious illness such as HIV, Lyme, cancer, and malaria at concentrations of 12 ppm.
- ◆ Affects single-celled microorganisms in a fluid medium (bloodstream, water, etc.), but not in solids.
- ◆ Appears to increase immune function in mammals, independent of its pathogen-disabling properties.
- ◆ Is an essential nutrient, as it promotes proper immune function, healthy cells, and tissue regeneration.
- ◆ Does not create permanent microbial resistance. (Some research indicates that soil-based microorganisms may develop a temporary resistance to concentrated silver, but this resistance leaves in one generation—which, in the case of soil-based organisms, is one to two weeks.)
- ◆ Can be ingested by itself, added to food and beverages, inhaled, bathed in, and applied topically to the skin.
- ◆ Is painless when ingested or applied.
- ◆ Tastes almost like pure water, so is very easy to ingest, even for small children, picky eaters, and animals.
- ◆ Is easy to make, requiring a simple device.
- ◆ Is completely safe and never poisonous in any amount.
- ◆ Is still effective at 25 ppm, although any higher ppm is probably a silver *compound*, which is not desirable.
- ◆ If improperly made, can cause a bluish gray discoloration of the skin, *which can be reversed*.

Today, more than ever, we need a reliable, safe substance that can kill many virulent pathogens—whether it's the simple flu, a stubborn *Candida albicans* infection, or more advanced diseases such as Lyme, patented strains of Ebola, Morgellons, or some other horror that hasn't yet been seen on all continents. You'll have an advantage if you own equipment for making colloidal silver and use it regularly. For a quick guide to how handy silver can be, see Insert on page 411, "Uses for Colloidal/Ionic/Electrolytically Isolated Silver."

One more thing. I believe in moderation. Unlike some people, I don't drink EIS every day, but save it for when I truly need it. However, when I do need it (as during an infection), I don't hesitate to drink a pint or more.

EXERCISE

Summary of Benefits

In the past, before high-rises, cars and elevators, our ancestors walked and trotted and ran. They chased the food they hunted and climbed to reach what they picked. Humans didn't sit for most of the day, hunched and slumped over their desks. They didn't ruin their eyes gazing at computers and playing video games. Nor did they need to walk on treadmills or climb the moving stairs at the local gym or health club in order to meet their quota of exercise. These are strange times indeed in which to be alive.

Although not everyone lives in a city today, often even country dwellers don't get enough exercise. Either diabetes or a pre-diabetic condition now affects over one-quarter of the population in the United States. Over two-thirds of adults are overweight or obese, and between one-third and one-half of the children are overweight or obese. Can you think of a better time to begin an exercise program?

Exercise promotes the following:

- ◆ Muscular strength (a muscle's capacity to push or pull against an opposing force).
- ◆ Muscular endurance (the ability of large muscle groups to exert force for extended periods of time).
- ◆ Cardiovascular endurance (the ability of the heart to pump blood through the circulatory system).
- ◆ Flexibility (range of movement around a joint).
- ◆ Improved body tissue composition (a lower ratio of fat compared to the amount of lean muscle and bone).
- ◆ Improved immune cell function (increased protection from infectious diseases).
- ◆ Increased breathing rate (which supports a greater oxygen-carrying capability in the lungs).
- ◆ Improved recovery times from injury (due to increased blood and lymph flow, which helps rebuild tissue).
- ◆ Increased sensitivity of the cells to glucose, insulin, and leptin (which help balance blood sugar levels and normalize weight, independent of calorie usage).
- ◆ Increased flow of blood, oxygen, and neurotransmitters in the brain (which encourages more stable moods and effective mental processing).
- ◆ Increased repair rate of *telomeres*—tiny caps on the ends of DNA strands—which help improve cellular health and have anti-aging effects.

Aerobic and Anaerobic Exercise

Exercise is generally classified into two types (although they do overlap to an extent): *aerobic*, which utilizes large amounts of oxygen, and *anaerobic*, which does not.

Aerobic exercise involves large-muscle groups. These are involved in steady physical activity such as running, jogging, brisk walking, swimming, bicycling, skating, dancing, skiing and other sports, which occur over a long enough period of time that more air than usual is taken into the lungs. During aerobic exercise, the heart functions more efficiently than when the person is resting, in order to provide the body with increased amounts of oxygen. The body is also more efficient at extracting and using the oxygen that it needs. Aerobic exercise increases levels of endorphins, cortisol and growth hormone, substances that increase pain tolerance and improve muscle tone. Aerobic exercise also induces sweating, which excretes toxins through the skin. (Sweating can be augmented with a visit to a hot tub, steam room or sauna; see the section on **Sauna Therapy** later in this chapter.)

Anaerobic exercise doesn't require as high an oxygen expenditure as aerobic. Stretching is generally anaerobic. Weight lifting used to be considered anaerobic, but it can *become* aerobic under these conditions: if it's done with lighter weights and many steady repetitions, and if it's done after high-intensity interval training or HIIT (discussed shortly).

Typically, moderate exercise is defined as causing a slight increase in breathing and heart rate. Brisk walking and bicycling, and tasks such as gardening and vacuuming, are usually included in this category. Vigorous exercise is defined as causing a substantial increase in breathing and heart rate. Aerobics (jumping) classes, running, and heavy manual labor are usually included in this category.

Exercise and the Lymphatic System

One important benefit of exercise is the easier movement of the toxin-laden *lymphocytes* (immune cells) of the *lymphatic system*. Most people are familiar with the cardiovascular or circulatory system, but less so with its lymph counterpart. The lymphatic system is a vast network of channels that run somewhat parallel to the blood vessels. They reach all the areas of the body, including the brain. I want to spend some time explaining how the lymph system works because these channels provide critical waste removal and immune support—and if they aren't maintained properly, the entire body can malfunction.

The nourishment and waste collection processes of the body are interrelated. Whereas oxygen exchange occurs in the red blood cells of the cardiovascular system, waste

Swim, But Not In Chlorine

Swimming is often (and correctly) touted as one of the best forms of exercise. Aerobic by definition, swimming utilizes the large muscle groups, which are responsible for the most rigorous movements (and a high calorie expenditure). But, unlike any other aerobic activity, swimming also works the muscles without stressing the skeletal system.

Water is twelve times as dense as air, providing 12% to 14% more resistance than when comparable exercise is done on land. By nature, water doesn't permit sudden movements, wrenching or jarring; so for the most part there are no impact injuries. Subjectively, the body submerged in water feels lighter. Immersed to the waist, people support half of their weight. Immersed to the chest, people support only about 25% to 35% of their weight. And immersed to the neck, people support only 10% of the body's weight.

Water disperses heat more efficiently than air, so compared to other forms of exercise there's less chance of overheating. However, the swimming water should be the correct temperature. For most purposes, the temperature should be between 85°F and 89°F (about 29.5° to 31.7°C). Those doing competitive swimming and high intensity water exercise can tolerate 82°F (about 27.8°C). The elderly, infirm, and children require warmer water.

Because swimming does not stress the joints, and both stretches and strengthens muscles, it's good for people who have arthritis. Movement while being immersed in warm water (exercise hydrotherapy) has been used for centuries for people with neurological and muscular disorders. Hydrotherapy often involves alternating immersion in warm and cold water. This moves the lymph.

In the US, most public swimming pools (as well as hot tubs) are sterilized with chlorine. In small amounts, chlorine causes skin rashes, boils, and allergies. In larger amounts, it's carcinogenic. Chlorine seeps directly into the bloodstream through the skin's pores, so swimming in a chlorinated pool is the equivalent of drinking gallons of chlorinated water. Therefore, even though swimming is wonderful exercise, it's a health hazard in contaminated water—whether the contamination is from pathogens or chemicals including chlorine.

If you can't get to a clean lake, river, or ocean, try to find a pool that uses ozone or salt water. There are also purification systems that utilize an electrolysis process to produce copper, zinc and silver ions, which kill bacteria and algae without the use of any chemicals. These systems are so effective and safe, it's amazing that they aren't more popular.

collection occurs in the lymph capillaries. Both systems deal with nutrient exchange because the cardiovascular system is so closely partnered with the lymph network.

During circulation, large arteries leave the heart on the left side, picking up (from both lungs) fresh oxygen carried by red blood cells. It is the oxygen that gives the arterial blood its bright red color. All other nutrients, along with the red blood cells, are carried by a clear, thick, viscous liquid called *blood plasma* or simply *plasma*. As the arteries become smaller, they branch out into smaller arterioles, and eventually tiny capillaries. Capillaries reach every cell in all the tissues to deliver oxygen to the body. When the capillaries arrive at the tissue sites, the red blood cells in the capillaries release the oxygen they were holding and pick up the carbon dioxide that's a normal byproduct of cell metabolism. At this point in the oxygen-carbon dioxide transfer, the arterial capillaries become venous capillaries. However, it's all the *same continuous network* of blood vessels.

Their job complete, the carbon dioxide-filled capillaries—which become somewhat larger venules, and then the large veins—return to the heart. It is carbon dioxide that gives the venous blood its dark red color. This concludes the discussion of how the blood travels, but there's one more pertinent detail. Capillaries are so tiny, they can hold red blood cells only if the cells pass through single file. Once blood reaches a capillary, there is so little room and such high pressure in the capillary channel, that some of the thin plasma fluid is squeezed from the capillary. This nutrient-rich, watery fluid bathes each cell, supplying the needed nutrients. The fluid squeezed from the blood plasma that surrounds each cell is now called *interstitial fluid*. After the cells extract their nutrition from the interstitial fluid, they dump, into this same fluid, the toxic waste products of their metabolism. This is the point at which the lymphatic system performs its valuable service of managing the waste materials from the body's tissues.

The lymph capillaries, designed to pick up vast quantities of debris, are highly permeable. The waste-filled interstitial fluid gravitates to the nearest tiny lymph capillary, where it is now called *lymphatic fluid*. (It should be noted that the lymph vessels are only near the venous capillaries and veins, not the arterial capillaries and arteries.) The lymphatic fluid then travels through the lymph capillaries to larger and larger lymph vessels, eventually arriving at cleaning stations called *lymph nodes*. These major lymph nodes are quite large. They are clustered in the back of the throat (where they are called *tonsils*), at the neck (where they are called *lymph glands* or simply *glands*), at the armpit, and in the groin area between the legs. In these lymph

nodes, the lymphatic fluid is cleaned and the toxins are neutralized by the white immune lymphocytes and other immune cells. Afterwards, the lymph fluid seeps back into the bloodstream. Any parasites, bacteria, fungi, viruses, and miscellaneous impurities remain in the blood, where the white immune blood cells called *leukocytes* gobble them up.

Unlike the blood, which is pushed through the body by the heart, the lymphatic fluid has no comparable pump. *A Massage Therapist's Guide to Pathology* states:

The immune system is unique. . . . It is a nebulous, incredibly complex collection of cells and chemicals stationed all over the body whose coordinated function is . . . fundamental to keep[ing] the whole organism alive.

If everything is working well, fluid levels in the tissues should be constant, but not stagnant. The amount of fluid being squeezed *out* of circulatory capillaries should be almost equal to the amount being drawn *into* lymphatic capillaries. .

. . . But a backup anywhere in the system could result in major changes in fluid balance. If lymph vessels or nodes are blocked, for instance, the body won't stop producing interstitial fluid. This fluid will accumulate between tissue cells. It will cause swelling and quickly become a hindrance to diffusion and other chemical reactions. . . . This is the problem with many of the diseases of the lymph system. . . .²¹⁷

Lymph fluid is extremely dense. It moves when it's subjected to mechanical pressure, to alternating heat and cold (which expands and contracts the tissues), and to deep breathing (which moves lymph fluid in the diaphragm area). The mechanical pressure moving the lymph can be either externally applied, as with massage, or generated from within, as when exercising. "When muscle fibers squeeze down around lymphatic vessels," write the authors of *A Massage Therapist's Guide to Pathology*, "they push [lymphatic] fluid through just like a hand squeezes around a tube of toothpaste."²¹⁸

When we don't move, we contribute to our own auto-intoxication and eventual illness. Once the lymph vessels become too clogged, a strong odor from the body (especially the feet and armpits) emerges—often accompanied by low energy, swollen glands, foggy thinking, and even depression. There are many ways to induce movement in the lymph vessels; continue reading.

Anti-Inflammatory Effects of Exercise

Exercise fulfills another, vital function. Naturopath Jade Teta writes:

Properly performed exercise releases signaling molecules that stimulate a unique healing response that couples both inflammatory and anti-inflammatory mechanisms to repair, regenerate, and grow stronger tissue. . . . High-intensity, short-duration movement that is tailored to the individual, uses short rest periods, and engages the whole body may be the chief means of attaining anti-inflammatory effects from exercise.

As muscle [voluntarily] contracts, the genes controlling IL-6 [Interleukin-6, a type of *myokine* or protein secreted by muscles] are turned on. . . . When released from muscle [IL-6 is produced elsewhere in the body as well as in the muscles], and in high concentrations without [certain other biochemicals], IL-6 is anti-inflammatory.²¹⁹

Whenever I feel
the need to exercise,
I lie down
until it goes away.

—Robert Maynard Hutchins,
educational philosopher,
dean of Yale Law School
and president of the
University of Chicago
(1899–1977)

Fibromyalgia is a condition characterized by chronic muscular inflammation and pain. The pain and fatigue from fibromyalgia may discourage people from exercising, but those suffering from this condition often are the ones who need it the most. They will greatly benefit from *moderate* exercise. The fact that exercise helps curb inflammation, and also helps protect the body from diabetes, cardiovascular diseases, dementia, depression and cancer, points to the role of inflammation in these conditions. I will soon discuss, in more detail, the high-intensity exercise that Jade Teta recommends.

Exercise, Telomeres, and Anti-Aging

People who exercise on a regular basis report feeling not only better, but younger. This isn't subjective—they are experiencing what's actually occurring in the body. More cells are being restored, and more quickly. This restoration is measurable in the rapid transformation in the *telomeres*, proteins at the ends of chromosomes that are analogous to the plastic tips at the ends of shoelaces. The function of the presumably inert telomeres is to protect chromosomes from binding to each other (DNA is very sticky). Normally, every time a cell divides to create another cell, a bit of telomere tip is removed and the total amount of telomere material lessens. After the protective telomere tip wears away—leaving a DNA

Meditation Using the Breath

For thousands of years, Buddhist yogic masters stated that pranayama and other breathing practices enhance the ability to focus and decrease emotional reactivity. Neuroscientists have confirmed that breathing affects the levels of noradrenaline, a natural chemical produced in the brain. With too much noradrenaline we can't focus. With too little we feel sluggish and unfocused. But with optimal levels—released when we are curious, challenged, focused, emotionally aroused or have been exercising—the brain grows new connections.

By focusing on (along with sometimes regulating) the breath, we can optimize our attention level. Conversely, by focusing on our attention level, our breathing becomes more synchronized. The correct breathing meditation can promote clearer thinking and memory, more stable emotions, and overall health.

forest, or by the side of a mountain, listening to a waterfall or birds, while feeling the warmth of the sun and taking in sunlight through closed eyelids.

Even though you might appear to be “doing nothing” while you rest, your entire system is quite busy! The liver replaces all of its cells every six weeks, we grow a new skin each month, bone cells are replaced every three months, and the stomach gets a completely new lining every four days. People who are ill not only deal with the normal systemic repair and replacement of cells, but their metabolic, excretory and immune functions are working overtime. Unfortunately, in technically advanced countries such as the US, self-worth is too often equated with superior, visible achievement. So it's easy to feel that if we're not pushing frenetically to “make something of ourselves,” nothing is happening. But this isn't true; healing is a major job.

New research indicates that naps taken during the early part of the afternoon recharge the mind and body, and decrease the amount of sleep needed at night. For centuries, people in many cultures have taken afternoon siestas; and some businesses in the West are now emulating this practice. Sleeping lounges have been set up for office employees, complete with couches, pillows, blankets, and alarm clocks. Employers are discovering that the 20 or 30 minutes a worker is absent from the job to take a nap more than exponentially increases work efficiency and productivity, as well as morale.

If you cannot nap or get extra sleep, meditation may be a surprisingly good substitute. At least, it will somewhat mitigate the harm of loss of sleep. Let us explore why this possible.

MEDITATION

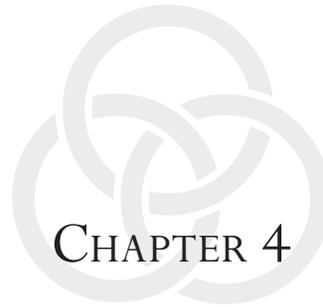
Until recently, meditation was regarded as esoteric—either the domain of orange-robed yogis, or practiced by ragged sages who renounce all worldly possessions and climb into a secluded cave in the Himalayas. But you don't have to join a religion or cult to meditate (or benefit from it). Some people meditate as part of their spiritual practice, others do it to release stress and relax, others do it to release stress and improve their health, and still others do it for mental and emotional clarity. I will address solely the physical, mental and emotional benefits, as spirituality is personal and subjective.

Whatever meditative technique is employed, the goal of all meditation is to increase mindfulness. *Mindfulness* may be defined as the quality of being attentive, aware, and centered or grounded in one's self. This allows one to focus on goals with equanimity and purpose—which means better managing one's emotions and overall life—instead of becoming distracted and frantic. The Greater Good Science Center at the University of California at Berkeley explains that the concept of mindfulness, which has roots in Buddhist meditation, has recently become more mainstream.

Mindfulness means maintaining a moment-by-moment awareness of our thoughts, feelings, bodily sensations, and surrounding environment, through a gentle, nurturing lens. Mindfulness also involves acceptance, meaning that we pay attention to our thoughts and feelings without judging them—without believing, for instance, that there's a “right” or “wrong” way to think or feel in a given moment. When we practice mindfulness, our thoughts tune into what we're sensing in the present moment rather than rehashing the past or imagining the future.³⁰⁷

In his comprehensive manual *Practical Meditation*, author and meditation coach Giovanni Dienstmann gives the history of many types of meditation. He explores the many physical, emotional, and mental benefits. He explains how to implement just about any practice you could imagine. And he discusses mindfulness.

Thinking is what the mind does. There isn't much you can do about that. But with meditation, you can calm this noise down. Instead of being lost in your mental chatter, imagine . . . starting your day with more calmness and clarity. You recognize thoughts or monologues as they start to surface and can choose to simply notice them and let them go, or play along with them, but



All About Frequency Devices and Rife Sessions

HOW TO BEST USE THIS CHAPTER

This chapter contains all the “how-to” aspects of rifting. First, you will be told who may safely use this technology, who should not, and who may use it under certain conditions. Then you will learn about the various features of frequency equipment, how to choose a unit that’s right for you, and what to look for in a manufacturer. You will be given a crash course on how frequencies affect pathogens and the body, and how to select the correct frequencies for your condition. You will also be guided step-by-step on how to give yourself a rife session. This includes session length, duration between sessions, and how to manage the toxic waste resulting from the microbial die-off. I’ll also discuss providing rife sessions from the perspective of practitioners.

Before we continue, I want to emphasize the following points:

- ◆ *It’s essential that you read **Precautions for Using This Equipment**, next page. As with any healing modality, there are circumstances under which you can safely use this technology, times when it is *not* safe to use it, and circumstances when you can safely use it *if you are receiving medical supervision*. If you don’t understand the limits of this technology and you don’t use it responsibly, you may not get results—or, more important, you may actively harm yourself.*
- ◆ *Drink plenty of water during and after the session (for at least 12 hours afterward), regardless of your condition or what device you are using. This may mean one or two quarts of water or possibly more. Water flushes out the toxic debris that rife sessions release. Make sure that the water contains minerals. These can be in the form of liquid electrolytes, chlorophyll, lemon juice, or something similar. Minerals in the water will help replace the minerals that your body will be using to help detoxify from, and eliminate, the debris. Do not use distilled water! See Chapter 3, **Water**, for more information.*
- ◆ *Read “A Short Course on How To Give Yourself a Rife Session” at the end of this chapter. It provides an overview of the basic protocols, general instructions on how to use the frequencies, specific guidelines for a few difficult conditions, and an additional troubleshooting section if you encounter special problems or don’t seem to be responding favorably to your frequency sessions.*
- ◆ *Be aware that I am not offering medical advice. I am reporting discoveries gleaned from reliable researchers and describing what works and why, based on accounts from experimenters worldwide. It is up to you to use your intelligence, intuition and common sense to discern what is suitable for you and what is not. As always, if you are ill, consult with a qualified health practitioner of your choice.*

PRECAUTIONS FOR USING THIS EQUIPMENT

Be careful when experimenting with this technology. Some units are safe for people with certain conditions but not others. **Types of Frequency Devices** (immediately following) describes different types of units in detail.

If You Have a Heart Condition, But Are Not Wearing a Pacemaker

You must limit your contact with rife technology, or even avoid it entirely, depending on what type of unit you use. Continue reading for the different types of units and the conditions under which they may be used.

Electrode (Pad) Unit

Do not under any circumstance use an electrode unit that transmits the frequencies by means of an electrical current. The electrodes can be in the form of metal hand-held cylinders, flat metal plates on which you rest your bare feet, electrode patches that stick to your skin, thin metal sheets covered with a wet cloth, or metal pans of water, in which you place a part of the body. The electrical current emitted by electrodes may disrupt the beating of your heart and could even kill you. These same warnings, by the way, apply to other electrical devices that touch the body such as ultrasound machines and TENS units.

Radiant Plasma Unit

This technology is considered safe. However, your unit may come with an optional foot plate for grounding. This is similar to an electrode. *Therefore, do not use the foot plate.*

If You Are Wearing a Pacemaker for Your Heart Condition

A pacemaker is a small battery implanted under the skin on the left side, usually below the collarbone, and connected to the heart with wires. It monitors the heart rhythm. If the heart starts to beat too slowly, the pacemaker sends electrical impulses to the heart, causing it to contract. (Pacemakers have no effect on rapid heartbeats, discomfort in the chest area, or weakened heart tissue.)

In order to address frequency device safety for pacemaker wearers, I need to first briefly summarize how pacemakers operate and general safety precautions for pacemaker wearers advised by the medical profession.

The earliest pacemakers were not electronically sophisticated. Like their modern counterparts, they could malfunction from even mild electrical current that touched the body. Older pacemakers also malfunctioned when exposed to *RF frequencies* transmitted through the air. (A

certain frequency range is known as *RF*, short for “radio frequency,” because radio broadcasts are transmitted on them.) In addition, older pacemakers malfunctioned when microwaves were emitted by leaky microwave ovens. Early pacemakers were so crude that some restaurants displayed signs warning wearers that a microwave oven was being used on the premises. Even if the chances were slight that a customer’s pacemaker would be affected by microwave leakage, restaurant management understandably didn’t want to risk any negative reactions or lawsuits.

Due to these serious malfunctions, starting around the mid-1980s, pacemaker manufacturers began *shielding* the devices—covering the delicate inner circuitry with a protective coating—so the pacemakers would continue functioning even when exposed to various electromagnetic signals in the environment. Although new pacemakers are theoretically shielded, it’s possible, one manufacturing rep told me, that not all of them are—especially if they’re being used in less technologically developed countries. Older persons who received pacemaker implants years ago are also more likely to carry unshielded models.

Even though most new pacemakers *are* shielded, a new pacemaker wearer must still be cautious due to so many high-tech electronics on the market. Exposure to electromagnetic interference can affect a pacemaker’s function by readjusting its settings. Any stray electrical signal can confuse the device into registering that the heart’s electrical signals are different from what they actually are. Even a slight possibility of irregular settings requires pacemaker wearers to recognize the symptoms of pacemaker malfunction, among them dizziness and rapid heart rate. Please seek supervision of an experienced doctor who can closely monitor your pacemaker, provide follow-up evaluations, and offer immediate aid if necessary.

Every person wearing a pacemaker should receive a detailed booklet from the manufacturer stating whether or not the pacemaker is shielded, and what special protocols must be followed. Hospital personnel typically advise that people can safely use computers, copiers, electric blankets, electric tools, radar detectors, radios (AM, FM and citizen band), electric razors, televisions, and other appliances. Areas of greater concern include leaning over the idling engine of a car or against metal detectors found in airports and department stores. Areas of serious concern include nearby high-tension electric wires, high-voltage sites, and arc welding machines. Household cordless phones are safe; but the electromagnetic field from cellular phones could be a problem if the phone, while on, is held near the pacemaker (for instance, in a shirt pocket) instead of near the ear. (The dangers of most electromagnetic fields on the *body*, an entirely different issue, are discussed shortly.)

Many hospital tests and medical procedures, including radiation (for cancer), defibrillation, and electrical cauterization, should be done carefully even with a shielded pacemaker; and the device should be assessed afterwards to make sure it's working properly. Another area of concern is exposure to magnetic force fields from either magnetic resonance imaging (MRI) or other modalities that use oversized magnets. I mention this because some electromedical devices, which ordinarily are safe and effective, emit magnetic fields that disrupt pacemakers.

Clearly, with even the most modern shielded pacemaker there are risks. This is why it's so important to know about your particular pacemaker before trying rife technology.

Who among pacemaker wearers is most at risk for using a frequency device? Depending on what type of frequency device you want to use, your experimentation will be *limited or contraindicated entirely*. Please read the information below carefully—your life may depend on it!

Electrode (Pad) Unit

If you wear a pacemaker, do not under any circumstance use an electrode unit that transmits the frequencies by means of an electrical current! The electrodes can be in the form of metal hand-held cylinders, flat metal plates on which you rest your bare feet, electrode patches that stick to your skin, thin metal sheets covered with a wet cloth, or pans of water, in which you place a part of the body. The electrical current emitted by electrodes may not only disrupt the beating of your heart, it can also interfere with the function of the pacemaker and kill you. These are the same warnings given by manufacturers of other medical devices that touch the body, such as ultrasound machines and TENS units.

Radiant Plasma Unit With Radio Frequency

Electrode units are out of the question for a pacemaker wearer. Therefore, the only possible safe choice is a radiant plasma unit. Your first question to the company should be if the device is using RF to send the frequencies into the body, and explain why you need to know.

There are two types of radiant plasma units: those that use radio frequency (RF), and those that do not use RF. The RF is a carrier wave, which is a separate signal from the pathogen-disabling and biological frequencies that the user programs into the unit. See **Types of Frequency Devices** later in this chapter for more information on machines that use RF; but for now, here's a brief summary.

Most Rife researchers have assured me privately that radiant light units are perfectly safe—at least for those wearing shielded pacemakers—whether or not a unit is emitting RF, and whether or not a unit is touching the

body. Some RF unit manufacturers who say that the RF isn't strong enough to interfere with pacemaker function, advise sitting 6 feet away from the unit anyway, beyond the range of the RF. RF does dissipate, but how can the average layperson determine what a "safe" distance is?

A more prudent viewpoint is expressed by Rife researcher Jimmie Holman, who manufactures a radiant plasma unit that emits very high levels of power and precise wave forms without any RF. He emphasizes some important differences between radiant units that emit RF and those that do not.

Some of these light units are well constructed. But they emit enough electromagnetic interference to screw up a TV set badly. One of my earlier, experimental RF plasma tube units had some of the cleanest, lowest voltage emissions on the market—but in the wrong hands, improperly tuned, it could cause problems. Even a loose cable can be responsible for severe RF leakage. This is why I now refuse to sell such units.¹

A critical point is "properly tuned." One of my favorite frequency devices has an RF carrier wave of 27.12 MHz. A correctly working RF unit can be highly effective, but it causes problems and can even become unusable if it loses its tuning. This became clear to me on a very personal level several years ago, when two men from my local phone/Internet provider knocked on my door at seven at night. The Internet connections of many of my neighbors had been constantly interrupted over the course of two weeks, and after numerous complaints the service technicians traced the disruptive signal straight to me. Sure enough, the signal was coming from my office, where the frequency equipment was conveniently set up next to my computer. My own Internet connection had been erratic ever since I received the machine, but until the technicians showed up, I didn't know why. (Note that this was a *wired* connection that was being affected, and not WiFi.) I had to send the unit to the company for repairs.

Check with both your doctor *and* your pacemaker manufacturer to make sure your pacemaker is shielded. If it's not, you'll need to consider the pros and cons carefully. If I were wearing a pacemaker and had a terminal illness that wasn't responding to other treatments, I would use an RF unit if a non-RF unit wasn't available. Fortunately, modern pacemakers are supposed to be manufactured so that they're shielded properly.

If you wear a pacemaker and do decide to use an RF tube device: your unit may come with an optional foot plate. This is similar to an electrode. *Therefore, do not use the foot plate.*

Radiant Plasma Unit Without Radio Frequency

For pacemaker wearers, the only safe choice is plasma. Even then, you may want to use a machine that does not emit RF.

Ask the manufacturer if the device is using RF to send the frequencies into the body, and explain why you need to know. If the equipment does not utilize RF or emit any other known signal that could disrupt pacemaker function, you may freely use the machine. (Some people who are very sensitive to RF and electromagnetic fields in general may wish to use a radiant unit that doesn't use RF. This is discussed shortly.)

Regardless of what type of pacemaker you have: your unit may come with an optional foot plate. This is similar to an electrode. *Therefore, do not use the foot plate.*

Electrosmog or Electromedicine?

Not all EM fields are harmful. Briefly, the effects of EM radiation depend on:

- ◆ *Where on the EM spectrum* the wavelengths exist—in other words, *what type of wave* it is.
- ◆ The *concentration*—coherence vs. diffusion—of these wavelengths.
- ◆ The *voltage or force* with which these wavelengths interfere with bodily functions.
- ◆ *How* that radiation is being *transmitted and administered*.
- ◆ *Proximity* of the individual to the source of the field.

All of the above circumstances can literally make the difference between wellness and illness, life and death. Below are some fundamental differences between harmful and healing EM fields.

Electrosmog: Harmful EM Fields

- ◆ Signals are chaotic, sporadic, and inconsistent.
- ◆ Frequencies are in the range of living cells; combined with the chaos of the signal, they disrupt cellular function.
- ◆ Remove electrons from the body, thus supporting the propagation of free radicals.

Electromedicine: Healing EM Fields

- ◆ Signals are coherent, regular, and uniform.
- ◆ Frequencies may be in the range of living cells, but wave coherence makes them compatible with living organisms.
- ◆ Add more electrons to the body, thus helping to inhibit free radicals.

For more information, see Chapter 1 Insert, "Electromagnetic Fields and Your Health."

If You Are Wearing an Autodefibrillator

See the previous guidelines for pacemakers.

If You Are Pregnant

Nutrients that the mother ingests, chemical pollutants to which she's exposed, and the hormones she secretes, all travel through her bloodstream to the baby. So will the toxic waste from the pathogens that flood the system as a result of rifting. Because a developing fetus can't eliminate toxins as efficiently as an adult can, you may want to avoid rifting while pregnant *unless there's an emergency and/or you're consulting a doctor*. Note that this precaution applies *only* if the mother and/or fetus is ill, and whatever pathogens they harbor are being correctly targeted by the frequency equipment. If neither the mother nor child are ill, there will be nothing in the system to be killed by the frequencies, and the sessions will simply have no effect.

Electrode (Pad) Unit

The electrical current in the body may adversely affect the baby, especially if current runs through the abdomen.

Radiant Plasma Unit With Radio Frequency

The answer is *no*, for reasons similar to those given previously for pacemaker wearers.

Radiant Plasma Unit Without Radio Frequency

Rifers recommend a radiant unit lit by high voltage rather than radio frequency. See **Types of Frequency Devices** later in this chapter for details on machines that use RF.

Your unit may come with an optional foot plate for grounding. This is similar to an electrode. *Therefore, do not use the foot plate.*

If You Are Nursing

Nutrients that the mother ingests, chemical pollutants to which she is exposed, and the hormones she secretes, migrate to her milk to become part of the baby's diet. Although I have not heard any reports of babies being harmed from nursing when their mothers are using rife equipment, it's probably a good idea to avoid combining the two. *If you are nursing, there's still a way for you to give yourself rife sessions if you need them*. Express (pump out) extra breast milk before you start rifting, and refrigerate or freeze the milk. (Although freezing destroys some of the nutrients, it may be necessary to freeze the milk if you plan to rife over a long period.) This will give your baby an adequate milk supply during the period that you're

using the machine. To prevent your milk from drying up, pump your breasts as often as necessary during the rifting period, and throw away the milk because it might contain too much pathogenic waste. As soon as you feel well again, you can stop rifting and resume nursing.

If You Have Blood Clots

Electrode (Pad) Unit

Do not use contact electrodes, ever! Even small amounts of electrical current can cause some compression in the muscles, lymph and blood vessels. If you have a clot in a blood vessel that's near the electrode, and the clot breaks off into small pieces and travels through the bloodstream, it can lodge in the brain and cause a stroke.

Radiant Plasma Unit, With or Without Radio Frequency

This is safe, as the frequencies are delivered via an electromagnetic field instead of compression waves that are created by an electrode device (see above). Nevertheless, if you have a history of blood clotting or strokes and are concerned, first check with a holistic doctor, naturopath, osteopath, or other professional who's knowledgeable about Rife Therapy.

If You Are Taking Pharmaceuticals, Herbs, or Nutritional Supplements

Many electromedical devices can augment the effects of drugs or even natural substances such as herbs, vitamins and minerals. This is because the equipment causes increased electron flow in the cells—synonymous with charge or energy—resulting in heightened permeability of the cell membranes (called *electroporation*). If nutrients, herbs and medications can cross the cell membrane more easily, lower amounts are needed to do the same job.

If you are taking the prescribed dose of medication, and your tissues are now more receptive, rifting without monitoring the dose's effects may give you problems and cause effects you don't want. Even nontoxic herbs may cause undesirable effects by being more readily absorbed.

Therefore, if you're rifting while taking vitamins, minerals or herbs, monitor how you feel. If necessary, ask your practitioner to help you adjust the amounts you're taking. If you're rifting and receiving chemo for cancer, *make sure to tell your doctor so your chemo levels can be monitored and lowered if necessary!*

(Incidentally, more electron flow is also synonymous with increased oxygen. This means that the cells, instead of abnormally clumping together—common in people who are ill—are now more separate and functional.)

If You Are Wearing Metal Implants, Stents, or Breast Implants

Metal Implants

This pertains to both ferrous (which contain iron) and non-ferrous metals (such as titanium). The items may be wire mesh (screens in the abdominal area to repair hernias) or screws (used for hip replacements). You might feel warmth and tingling in the implant area, caused by the transfer of energy (called *inductive coupling* by engineers) within the metal object. Depending on the signal's wavelength, a metal implant might receive the signal because—like the DNA in biological tissue—it acts as a miniature antenna and resonates to that signal.

Metal implants could attract too much current from electrodes, but they don't react to plasma. If the area feels warm, there may be internal burning. In such cases, Jimmie Holman explains, “use different frequencies entirely or reduce the session time, possibly separating one longer session into several shorter sessions.”² Nevertheless, people with metal implants have reported safely using not only radiant plasma, but also electrode units; so it depends. Only on *very rare* occasions is rifting not possible.

Stents

A stent is a tube-like structure inserted into blood vessels or ducts to dilate them. Although stents are generally composed of wire mesh, rifers report having no problems—probably because the implant is quite small, especially compared to the wavelength. Thus the energy absorbed by the stent would be negligible. Nevertheless, be alert to possible symptoms similar to those from other types of metal implants. Stop rifting immediately and notify your doctor if you experience discomfort.

Breast Implants

No problems with any type of unit have been reported for people with silicone implants. However, silicone is quite dense, so it may be harder for the frequencies to penetrate the area. You may need to spend extra time rifting near areas containing such implants. More time may also be needed with the newer style breast implants that contain saline and are covered with silicone.

If a woman says, I am getting these breast implants to gain self confidence, then I have to ask, What kind of a society do we live in where a woman's self-confidence depends on having a dangerous, expensive and painful operation on a perfectly healthy body?

—Katha Pollitt
American poet, essayist, and critic
(born October 14, 1949)

animal won't voluntarily drink more water, put more liquid into the food or give the animal liquid foods—such as chicken soup for dogs or (preferably raw) milk for cats. Some dogs will drink more when colloidal silver is put into their water dish instead of their usual water. Homemade colloidal silver, with its natural antimicrobial and cell rejuvenation properties, is an excellent adjunct to Rife Therapy. Plus, it's inexpensive to make. Don't feed colloidal silver internally to ruminant animals, however; these animals depend especially on gut bacteria for digestion. Ruminants include cattle, sheep, goats, deer, elk, camels and llamas. See Chapter 3 for more details.

TYPES OF FREQUENCY DEVICES

People often ask me, "Where can I find a rife machine?" as if there existed a single device. There are many units, made by different manufacturers, that operate on rife technology principles but all are somewhat different. A Rife machine is a serious purchase—after all, the buyer might be gravely ill—but a useful analogy can still be made to buying a refrigerator. There are different styles of refrigerators. The freezer might be on top, on the bottom, or on the side. The refrigerator may or may not have an ice maker or cold water dispenser. The temperature control dial can be in the back or on the side, and so on. Similarly, frequency units can have many fancy features or only those considered essential. Users must decide what they need.

Basic Unit Construction

Whatever style you buy, the unit will basically consist of:

- ◆ The body of the unit (usually around 1 to 3 square feet, but sometimes larger), containing a computerized *function generator*. Usually the electronic components are housed in one box; but sometimes the components may be housed in two or more different containers, either side by side or stacked on top of or next to each other. (A recent development is a very small function generator controlled by a personal computer or palm computer.)
- ◆ Built-in dials, push buttons, and/or numbered keypads to program the unit.
- ◆ Display panel, usually digital. Occasionally, the device comes with a full-size computer screen. The display shows the frequencies programmed into the machine, the time period for which the frequencies have been set, and other information.

- ◆ Frequency transmitter. This may consist of metal electrodes (in various shapes and styles), or a plasma light tube (which can be freestanding or hand-held). Sometimes a unit will have a combination of the two. Occasionally, a frequency device has LED accessories as well (discussed later in this chapter).

A good frequency device should be well made, easy to use, have a warranty with an accessible manufacturer or dealer in case the unit needs repair, and (very important) sufficiently drive the signal into the body so the frequencies can be utilized. Within these parameters, there are lots of devices on the market today that are called "rife machines." Here is an overview of the different styles, with their advantages and disadvantages.

Mandatory Features of All Units

Effective frequency devices might do the same job, but they can be made differently and have different features. Following are the most desirable features for a frequency device.

Reliable Frequencies

It's important that what you program into the unit, what the display panel says has been programmed into the unit, and what the unit is actually emitting, are identical. Some people have specially designed test equipment to measure what frequency is coming from a machine. However, if you don't have such equipment yourself—and most people don't—you must rely on the company's word that the device is accurate. Can you trust the manufacturer's integrity? And his or her skill to build a quality unit? You might ask, "Do you test each machine to make sure it's delivering what it's supposed to? What measuring equipment do you use?"

Signal Acceptance by the Body

The goal of all equipment should be a safe signal that will penetrate the body in a way that the body will accept.

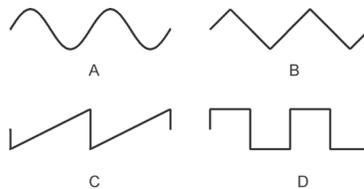
Too many people believe that more is better, bigger is better, more powerful is better. But blasting that harmful microbe with everything you've got, usually means bombarding the body; and this isn't optimal or even effective. It's understandable if rifers are tempted to blast, because people who are ill want to feel better immediately. However, *the body's receiving the signal doesn't necessarily correspond to higher power levels*. In fact, with biologically based medicine, the opposite is usually true. An excessively strong signal may be the wrong kind of output when the force of the signal is incompatible with

Signal Penetration:

Wave Shapes, Harmonics, and Duty Cycles

One of the most common questions asked by rifers relates to signal penetration. What, besides the correct frequency, allows a signal to penetrate the cells of the body, kill pathogens, and stimulate the system's healing abilities? The answer relates to the shape of the wave, the harmonics of the frequency, and the duty cycle. I promise to make this as painless and understandable as possible. So, let's examine each in turn.

Wave Shapes. The *shape* of the wave determines whether it will penetrate the tissue. Below is a diagram of four waveforms often used in frequency devices. The most common waves are sine and square, although there are variations of these waves. Each shape has unique characteristics. (For more information about the electromagnetic spectrum, See Appendix C, "Healing with Electromedicine and Sound Therapies.")



Waveforms

(A) Sine; (B) Triangle; (C) Sawtooth; (D) Square

Please note: these shapes are not simply visual metaphors. *They are the actual wave patterns as seen on an oscilloscope* (a machine specially constructed to visually depict waveforms). *The shape is a literal indication of what the wave does and how it performs*, because each shape graphically represents the rise and fall times of the energy.

- A.** Sine wave gently slopes; there is nothing angular about it.
- B.** Triangle wave is pointy at the top, as though the energy were thrust or transmitted suddenly, like a knife.
- C.** A sawtooth wave, which looks like the teeth of a saw, acts like a triangle wave and is similarly pointy.
- D.** Square wave is very different from the other waves. It takes a very brief period for the energy to reach its maximum power level (this is called a rapid *rise time*). However, once the power is at its highest level (the horizontal line at the top), that level is maintained for a specific duration of the cycle. (One cycle is one complete wave.) The cycle is complete after the power level abruptly drops to zero and the next wave pattern begins.

Here's an analogy describing how these various wave signals perform, and how the body physically responds to them. If you put your hand on someone's back and exert a steady pressure, she will shift her weight and learn to compensate for your push. The relatively slow rise and fall times of a sine wave gives the body a chance to recognize, make adjustments for, and eventually ignore the signal. If, however, you suddenly push that person with the same amount of pressure, she will fall. The sudden thrusting quality of triangle and sawtooth waves takes the body by surprise. Similarly, the rapid rise and fall time of a square wave does not give the body a chance to compensate. However, the flat top line of a square wave means that after the body is taken by surprise, there is a relatively long period when the signal is steady. The body (and pathogens) may or may not reject the signal.

The shape of the wave is important not only because of the rise and fall times of the energy. The wave shape is also important because of the *harmonics* it produces.

find gating effective. Jimmie Holman writes: “If you are already using well designed equipment that’s capable of accurate and consistent delivery at higher frequencies, the use of gating is actually *counterproductive* because it acts as a break in the steady transfer of energy.” He illustrates his point with the example of soldiers marching on a bridge, who are ordered now and then to “break step.”²² Because their *unison marching rhythm is a wave—in other words, a frequency*—this can make the bridge shake and sway. Sudden halting breaks the rhythm, dissipates the momentum, and stops the swaying. Clearly, the benefits of gating (or the need for it) depend on how the equipment is transferring energy into the body. The goal is to get the body to accept the signal so it can utilize the energy. Holman’s devices, manufactured by Pulsed Technologies, can do this without using a gate feature, and the proof that this works is seen in the results. However, with other equipment, the gate feature is needed and works well.

Among those who prefer a gating feature, there is some debate as to the most effective rate. One analysis of an original Rife Ray revealed an incredibly rapid gating cycle; but as its rapidity was intricately tied to how the unit was configured to transmit frequencies, the rate cannot be applied to modern equipment. Some contemporary manufacturers have a precise formula for the amount of time the signal is on versus the amount of time the signal is off. For example, in one machine, the signal is on two-thirds of the time and off for one-third of the time. Some manufacturers build their units to be programmable with varied gating rates. Dr. Richard Loyd even has a formula for gating percentage according to the which frequency is being used.

Ultimately, the on-off rate of gating may be less important than the fact that the unit can be gated at all. The purpose of gating is to ensure signal penetration; so as long as both the body and the harmful microbes are receptive to the frequencies, that’s the most important thing. One researcher is experimenting with higher-than-usual gating cycles. However, they appear to produce physiological responses rather than kill harmful microbes, and their effects are still largely unknown. Thus, they aren’t recommended for the average user. Be aware that most RF plasma units cannot sustain abnormally high gating cycles.

One more thing. *Do not use the gate and the sweep functions at the same time, ever!* Some of the frequencies will run during the period when the signal is in the “off” portion of the gate, resulting in incomplete coverage of those frequencies, or even missing coverage of those frequencies entirely.

Q. My rife machine has a feature called *pulse*. What does this do?

A. Many rifers (who are not engineers) use the term *pulsing* when they really mean “gating” (discussed in the previous question). This can be confusing, because the word “pulse” is used in the phrase “Pulsed Electromagnetic Fields” (PEMFs), which means something else entirely. My personal preference, then, is to use the term “gate” instead of “pulse.”

Q. My unit already contains some protocols. Did someone program frequencies into the unit and forget to erase them? Was I sent a used or reconditioned unit?

A. Many rife machine manufacturers pre-load programs into their new units as a courtesy to their customers. They realize that some people are too ill to program the units themselves, and thus welcome this convenience. Some of the custom programs are popular frequencies for common ailments, while others may be for cancer. By the way, because your machine cannot be sold as a medical device (see pages 560–561), the cancer programs might not be called “cancer.” Instead, the readout might say “CAN” or something else.

Ask the seller if your machine is used. If it was, you should have received a discount in price.

Q. I’d like to decrease the amount of time I spend rifing. Some machines can transmit several frequencies simultaneously. Are they reliable?

A. There are two well-known frequency machines that can deliver more than one frequency at a time: the radiant plasma PERL M+ from Resonant Light, and the GB-4000 pad unit from AAA Productions. With the PERL-M, the radiant plasma part of the unit is powered by a portable generator called a ProGen 2. Two or three ProGen 2 generators can be hooked up together in sequence, which allows two or three frequencies to be emitted from the radiant plasma tube at the same time. With the GB-4000, up to eight different frequencies can be transmitted simultaneously through the hand-held electrodes.

To answer this question, I’ll provide the engineering perspective first. One engineer (who does not sell equipment himself) measured the waveforms emitted by the device on an oscilloscope, and found that the integrity of the frequencies may be compromised. Jimmie Holman of Pulsed Technologies describes how this could happen:

The Ergonom Microscope from Grayfield Optical Inc.

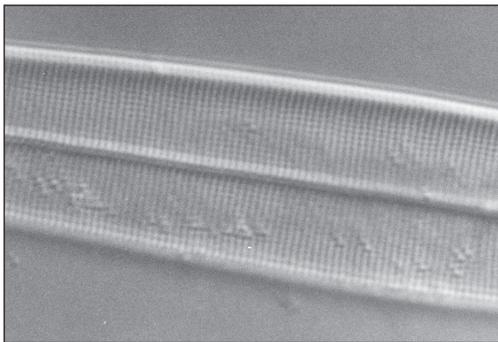


Ergonom 500

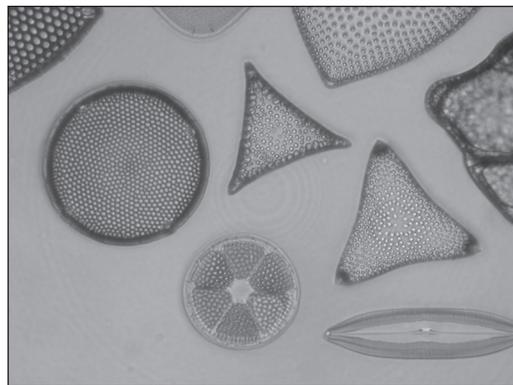
One of several Ergonom models.

In 1976, Kurt Olbrich invented a microscope with slightly higher magnification levels, better depth of field, and more vivid color contrast than Rife's instruments.

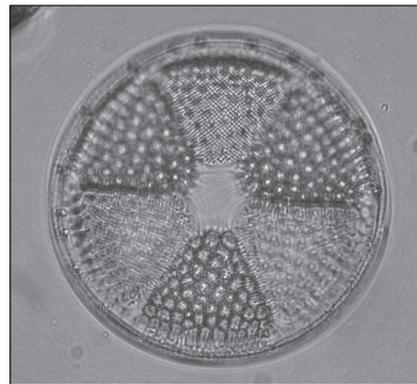
Operating on different principles than Rife's microscopes, the Ergonom is considerably easier to use as it requires no staining, oil immersion, or complicated focusing.



Amphipleura pellucida, a type of microscopic algae, as seen through the Ergonom. The finely detailed markings on this species are not as clearly visible under typical microscopes.



Various diatoms, as seen through the Ergonom. These microscopic algae come in different shapes.



Close-up of a diatom from the above group.

Q. I'm doing many complementary therapies in addition to rife sessions. How do I know which protocol is helping me?

A. Unless you have access to sophisticated electromedical diagnostic equipment or are being monitored by a holistic health practitioner, you may not know which therapy among several is the most helpful.

It's reasonable to want to eliminate repetitious or unnecessary protocols, especially if they're costly and time-consuming. However, there are many facets to health. Several approaches are usually needed, as they all provide complementary support. Understanding the *functions* of the different therapies will help you decide which ones you need and which ones you don't need at a given time. Generally, however, major lifestyle changes are mandatory. These include proper diet and exercise, suitable sleep, avoidance of chemicals and electrosmog, and psychological stress reduction.

Q. My partner is ill, and uses a radiant plasma machine daily. Will my children or I be negatively affected if we're in the same room?

A. Many of the frequencies are for the Mortal Oscillatory Rate (MOR) of pathogens, while others solely enhance cellular function. Still other frequencies appear to both negatively affect pathogens and benefit body tissues.

If you're harboring a pathogen whose MOR is being transmitted by a nearby rife unit, that pathogen will be affected by the machine's field. Therefore, you may experience a die-off reaction (within 24 hours): thirst, nausea, fatigue, weakness, or another indication that a detox process is occurring. If you're *not* harboring pathogens that correspond to the MOR being emitted, then being near the device will simply have no effect and you won't experience detox reactions.

On the other hand, frequencies that help normalize or add energy to body tissue may have an effect—albeit a beneficial one. You may experience increased energy or an augmented feeling of well-being.

If you're using radiant plasma equipment and there are other people or animals in the room who should not be rified, keep them out of the room. The checklist of candidates for rifting is at the very beginning of this chapter. If you think that others could benefit from the frequencies, even as “incidental recipients,” treat them as you would any other rifer. Monitor their responses and be prepared for possible detox reactions. Make sure they drink enough water to handle the effects of microbial die-off, should they experience this. And ask them if they feel better from the rifting.

Q. Rifting with my radiant plasma device helped me eliminate a cold. My daughter, who also had a cold, said that she felt the signal when she was in the next room. She's no longer sick. Can the frequencies really penetrate a wall?

A. Some radiant plasma units are powerful enough to send their signals through walls. Even though the gases in the tube light up to produce the frequencies, it's the resulting *electromagnetic field* (what some rifers call the “field effect”) that conveys the healing, not the luminescence from the light when the tube is on.

The human body transmits and receives many different kinds of EM fields. Years ago, when I had a plasma unit equipped with two hand-held glass cylinders, several people reported feeling its energy about 8 feet across the room as soon as I activated the tubes by picking them up. On other occasions, a very sensitive woman could tell as soon as she entered the room that a (different) plasma device had recently been turned on. Sometimes people can feel signals from rife machines through walls or sense “after-images” from lingering radiation, even over longer distances.

Q. How do I use the stimulating and normalizing frequencies?

A. There's a difference between frequencies (or substances) that normalize or regulate, and those that stimulate. *Normalizing* or *regulating* an organ or gland calms it if it's overexerting, and gives it more energy if it's lethargic. However, *stimulating* an organ or gland increases its output of activity. Whereas depleted body parts may benefit from carefully applied stimulation, organs or glands that are already overworking should not be forced into more activity. The few frequencies that appear to be stimulating to various organs or glands (as opposed to simply normalizing) may have an unwanted effect on you if you do not want that particular body part to be stimulated.

As always, pay attention to how you feel and stop rifting if it's not helping your overall wellness.

Q. Does it matter which direction the light tube is facing?

A. People can be affected by the plasma tube's energy field regardless of the direction in which the tube is facing. However, you'll probably get a stronger effect with a directional light. The tube on most units has a piece of metal across one side that acts as a reflector. Face the portion of the light toward you that isn't covered by the metal.

Q. What if I don't get any results from the frequency sessions?

- A. See the Insert at the end of this chapter, "A Short Course on How to Give Yourself a Rife Session." It suggests what to do if you're not getting results.

Q. I was getting very good results when rifting for a chronic condition until I took a two-week break. Now the same frequencies don't seem to be working. Why?

- A. There are two possibilities. One, you may have given the pathogens a chance to become resistant to the frequencies. The few remaining hardy stragglers could have changed their rate of oscillation so that frequencies which used to work no longer match the current MOR of the pathogens in your system. Two, the rifting did such a good job at reducing the microbial load that you're no longer infected by the pathogens.

If your machine has the capability, run a converge or a sweep to address possible mutations. Also try different frequencies. This situation illustrates the importance—especially for those with chronic, difficult or life-threatening conditions—of doing Rife Therapy consistently for longer periods of time.

Q. Can the frequencies in *The Rife Handbook* be converted into radionics rates? If not, what's the difference between rifting and radionics?

- A. *Radionics* is a healing modality characterized chiefly by intent, and is sent over a short or long distance. Anything can be sent radionically: essential oils, herbs, vitamins, minerals, good wishes, bad wishes, a desire for healing or harm, or frequencies emitted by a rife machine. Radionics is one form of non-local, *subspace* healing (see Chapter 6). Quantum physicists refer to connection at a distance as *quantum entanglement*. In quantum experiments, subatomic particles that are connected remain connected, even when separated by thousands of miles. An act performed on one particle affects the other. This is true in the macrocosmic world as well, with biological materials. In one study, white blood cells were taken from a subject and put into a Petri dish. The subject was attached to electrodes and shown an upsetting film. He felt anxiety, which the electrodes recorded. Miles away, in another laboratory, his white blood cells registered the same electrical activity at the same time.

A radionics *machine* is designed to send information in the form of energy to someone else. The person can be in the same room or across the ocean. The radionics

practitioner places a client's photo, saliva sample, lock of hair, a speck of blood, or some other representation (called a "witness") in a chamber of the radionics machine. A vitamin, mineral, herb, etc., is placed in the machine with the witness. Then the energy of the healing substance is sent to the person via subspace.

Radionics machines work on a completely different principle than rife units. They may use numbers called "rates," but these rates are not the same as frequencies that are measured in hertz or multiples of hertz. Rates are arbitrarily assigned numbers—reference points for the equipment operator—and each radionics machine manufacturer uses different rates. The operator's skill determines the rates (and success of the sessions).

On the other hand, the frequencies used during rifting *can* be used radionically. Put another way, Rife Therapy can be sent subspace, and rife machines can be used radionically to convey frequencies.

Here is a true story. Several years ago, I was contacted by an avid rifer whom I will call Jane. Jane had been giving long distance rife sessions to a friend with the flu. She wrote his name on a piece of paper, pinned the paper onto her shirt, and held the electrodes of a rife machine. Essentially, she was giving herself the same session she would have given him if he were physically present. The problem is, by helping him in this manner Jane was not only assuming the identity of her friend, she was also taking on his condition! Jane's friend got well, but she was coughing and sneezing and even had a fever—the very symptoms that she had eliminated in him.

Factors Influencing Us as Empaths

- ◆ **Receiving.** Our sensitivity as receivers will factor into how much energy we pick up.
- ◆ **Sending.** Some people transmit their energy more strongly than others, and the depth of the emotions that they are experiencing will also turn up the volume that they are sending out.
- ◆ **Awareness.** The unaware person may be just as sensitive as the aware person. The latter will understand why they have mood swings; the former will not.
- ◆ **Emotional Connection.** The stronger the emotional connection is, the less important the physical proximity is.
- ◆ **Physical Proximity.** Neighbors and strangers will influence us based on physical proximity. This is true for the people living in our neighborhood and the strangers we brush up against in the shopping mall.

—Trevor N. Lewis and Abbigayle McKinney
excerpted from *Thriving as an Empath*, 2016

Jane wanted to know how she could avoid becoming ill while giving surrogate sessions to her friends and family. I told her that she did not need to pin the names of other people to her own body. Nor did she need to even be in the same room while the frequency device was operating, especially because she already had such a powerful intent. I advised her to place either her friends' photos, or papers with their names on them, on the footplates attached to the actively running unit. Or, she could place the photos or names next to the plasma tube while it was running; it didn't matter.

At first Jane sat right next to the machine when she gave sessions. Once she was satisfied that her friends were receiving the healing, she allowed herself to do other things while being in the same room as the machine. Soon she felt comfortable switching on the machine and letting the frequency programs run while she left the room or even the building. Obviously, this woman felt very connected to her friends.

Three fascinating books that explain the physics of intention and various energetic therapies, along with lots of cutting-edge scientific data and the history of the scientists, are *The Secret Life of Plants*, *The Field*, and *Psychic Discoveries Behind the Iron Curtain*.

Frequency Selection and Pathogen Response

Q. How do the frequencies work?

A. The frequencies harm pathogens, benefit the body, or both. First I'll discuss the effects on pathogens.

A popular film from James Bare (which is often included in documentaries on Rife and shown on many Internet sites) depicts a protozoan through a microscope as it's being exposed to a Bare-Rife machine emitting a 1150 Hz signal with an RF carrier wave. In fewer than 15 seconds, a portion of the protozoan's membrane is punctured and its guts explode. However, the shattering of a microorganism, although visually dramatic and compelling, doesn't actually explain how frequencies disable it. Simply put, the frequency equipment matches wavelengths, or *resonance*, with the pathogen. This transfers electrons (energy) to the microbial cell wall. The increase in energy disturbs the pathogen's electrical charge, *changing its shape and pattern*—its structural integrity. This causes *electroporation*, or a bursting of the pathogen's outer layer, which is why its innards spill out. When a pathogen's structural integrity is compromised, it destabilizes rather than shatters.

The disruption of the electrical charge on or inside the microorganism can:

- ◆ Disable certain proteins.
- ◆ Devitalize certain enzymes.
- ◆ Disrupt the pathogen's ability to metabolize.
- ◆ Disrupt the pathogen's ability to replicate.
- ◆ Disrupt the pathogen's ability to reproduce.
- ◆ Disrupt the pathogen's ability to recombine.

Independent of killing or disabling noxious microorganisms, some frequencies benefit the body because they normalize or stimulate various organs, glands, tissues or body functions by:

- ◆ Beneficially reorganizing the RNA/DNA.
- ◆ Making the flow of ions across cell membranes more efficient.
- ◆ Increasing the number of stem cells (which speeds healing).
- ◆ Focusing the immune cells on a pathogen that was not previously recognized as a threat.

The recently deceased Dr. Robert P. Stafford, who had worked with Royal Rife, John Marsh and John Crane, believed that the frequencies stimulated the adrenal glands and may have had other immune-enhancing properties. Perhaps the signals cause or speed the leakage of unhealthy cells, thus encouraging their removal. (Normally, when cells start to die from old age, infection or disrepair, fluid leaks out of their membrane. Immune cells recognize this leakage as a message to scavenge what is now waste.) *Blast It!* author Carol Nichols, drawing on many years of experience with pad devices, writes that electrode units in particular "have a unique ability to stimulate atrophied muscle tissue, increase circulation of blood and lymph, stimulate regeneration of damaged nerve pathways, and rectify low tissue conductivity."³² Peter Walker, who reports on rife technology in Europe and also highlights pad devices (which are extensively used by European doctors), writes, "Pad devices have a positive effect because they can tonify the body and help improve its energy levels. Plasma units are great for killing parasites."³³ And the late engineer Aubrey Scoon believed that "magnetic and electric fields are inducing electrochemical changes in cell membranes which affect electrochemical pumping mechanisms."³⁴

Any electromedical device that causes the electrical charge of a cell to improve will assist with healing. Cells and other structures that are too weak or diseased to contain the charge that a healthy cell can hold, will

Could the phenomenon be related to its DNA, and if so, what is the resonance relationship? These questions and more have kept folks that use or explore Rife-related technologies awake into the wee hours of the morning on many occasions, and have been the focus of endless animated discussions.³⁵

Boehm knew that the physical length of any object correlates to its wavelength: “For instance, a person’s height has its own resonant wavelength and resultant frequency.” Therefore, she wondered, “Is it possible that an organism’s entire DNA genome [genetic material] could also possess a resonant wavelength and frequency related to its total length?” After examining the published analyses of DNA structure from biologists, she worked out a formula for calculating the wavelength of a microorganism. Then she utilized a common physics equation to determine the frequency. “It is interesting to note,” she writes, “that this frequency falls at the high end of the infrared section of the electromagnetic spectrum (near visible light), and in the general area of the spectrum that Royal Rife had under consideration in his microscopic work.”³⁶

To obtain the numbers for her calculations, Boehm uses a government database that contains measurements of an entire pathogen or portions of its structure (a modern convenience not available to Royal Rife). Her final step is to convert these very high figures to workable numbers that accommodate the permeability of both human and animal body tissues, and can be transmitted by modern frequency equipment. It’s not a coincidence that Boehm’s numbers for the pathogens that Royal Rife was working on very closely correlate with the frequencies in Rife’s original lab notes! Sometimes her frequencies exactly match those of Rife and modern researchers; other times, they’re within one to five Hz. These differences seem negligible.

Boehm was awarded a patent by the US Patent Office (#7,280,874) for her DNA frequency method, formally titled “Methods for determining therapeutic resonant frequencies,” on October 9, 2007. Her work holds enormous promise for the

successful use of rife technology as newer and more dangerous microbes continue to emerge and we need to find the debilitating frequencies quickly. For a very nominal fee, she provides customized frequencies on her website, dnafrequencies.com. Serious researchers have found Boehm’s frequencies to be highly effective, and most rifers who use this service report being very pleased with the results.

Please note: since the last edition of *The Rife Handbook* was published, Ms. Boehm formally established her frequency creation service as a business. Out of respect for her patented intellectual property, I have not included any of her data that was not in the public domain. However, her work is invaluable. The frequencies in this *Handbook* will not apply to everyone. If that’s the case for you, I highly recommend Boehm’s database, which has an excellent chance of succeeding—providing you know the exact microorganism you’re dealing with and your rife machine is accurate.

Knowing others is intelligence;
knowing yourself
is true wisdom.

Mastering others is strength;
mastering yourself
is true power.

—Lao-Tzu

Chinese philosopher and writer,
the founder of Taoism, and
attributed author of *Tao Te Ching*
(died 531 BCE)

Q. I have a diagnosis from my doctor. How do I know which frequencies to use?

A. The beginning of Chapter 5 explains how to use the Frequency Directory. However, be aware that although many people are satisfied with the results they get from the frequencies in this book, additional frequencies may be needed. If you have a diagnosis of a specific pathogen, the best site for custom frequencies is dnafrequencies.com. For a very nominal sum, you can get a customized program of frequencies that are mathematically calculated using the measurements of portions of the pathogen’s own DNA.

Q. What if I don’t have a diagnosis, and don’t know which pathogens are involved in my condition?

A. These guidelines will help you decide which frequencies to use (whether they’re from this *Handbook* or another source). During and after your session, don’t forget to monitor your responses so you can determine which frequencies offered the greatest relief.

- ◆ *Diagnosis that is pathogen-specific.* In many cases, it would be best to have the name of the particular harmful microbe that’s infecting you. Simply look up the frequency for it, as in *Babesia*, for example.

You Know More Than You Think

There's a reason the gut, or belly, is called "the second brain." Over 90% of all neurotransmitters—which we consider "brain" chemicals—reside in the gut and not the brain. This simple but powerful technique will help you (re)connect to knowledge you already possess.

Neutral. Close your eyes. How do your muscles feel? Relaxed or tight? Pay attention to your breathing. Is it fast or slow, noisy or quiet, deep or shallow, even or erratic? Feel your gut. Is it tight or relaxed, tense or easygoing? Imagine what your energy field is like. Do you sense it as dark or bright, dense and compressed or light and airy? This gives us a baseline before we move on.

Negative. Keep your eyes closed. Now think of a person or situation that made you feel really bad, uncomfortable, wrong. Don't worry, we won't stay here; this is to get a sense of how you feel in a negative circumstance. How do your muscles feel? Relaxed or tight? Pay attention to your breathing. Is it fast or slow, noisy or quiet, deep or shallow, even or erratic? Feel your gut. Is it tight or relaxed, tense or easygoing? Imagine what your energy field is like. Do you sense it as dark or bright, dense and compressed or light and airy?

Positive. Keep your eyes closed. Now think of a person or situation that made you feel really good, comfortable, right. How do your muscles feel? Relaxed or tight? Pay attention to your breathing. Is it fast or slow, noisy or quiet, deep or shallow, even or erratic? Feel your gut. Is it tight or relaxed, tense or easygoing? Imagine what your energy field feels like. Do you sense it as dark or bright, dense and compressed or light and airy?

Back to Ordinary Reality. Now shift your attention back to where you're seated. When you're ready, open your eyes. You have just reminded yourself that there are distinct differences between when you're in a neutral state, when you encounter something that's not right for you and makes you feel bad, and when you encounter something that *is* right for you and makes you feel good.

Your body is a measuring tool, a way of telling you when something is right and when it's not. You can use these kinesthetic, visual and auditory signals as clues or guidelines to help you figure out which frequencies to use. You can also use this technique to help you with any other decision in your life. These are your gut feelings. You can learn to trust them more.

—Nenah Sylver, PhD

adapted and excerpted from a presentation at the Rife Frequency Therapy, Electromedicine, and Holistic Health conference October 8–9, 2016 in Phoenix, Arizona (DVDs available at nenahsylv.com)

- ◆ *The name of a disease or illness.* Often, the name of a disease is a slight variation of the name of the pathogen. For example, Babesiosis is caused by the parasite *Babesia*. Borreliosis is caused by the spirochete bacterium *Borrelia*, and so on.
- ◆ *Diagnosis of an illness, pathogen unnamed.* If your doctor says that you have amoebic dysentery, you can rife for amoebic dysentery or the protozoa *Entamoeba histolytica*, which causes dysentery. Chapter 5 contains all this information, cross-referenced. It makes no difference which listing you choose because the frequencies are for the same problem.
- ◆ *General symptoms without a diagnosis, usually affecting specific parts or areas of the body.* Choose the body parts or systems that are manifesting the most severe or uncomfortable symptoms: respiratory tract, gastrointestinal tract, and so on. Chapter 5 contains frequency listings according to which body parts or systems are affected. As you read each entry associated with that body part or system, you will learn to detect what's ailing you.

Be aware that most diagnoses do not indicate the *cause* of the ailment. For example, multiple sclerosis can be caused or exacerbated by a particular pathogen and its wastes, chemical toxins, or heavy metals. A migraine can be caused by an allergy, toxified liver, or *Candida albicans*. You'll have more success with frequency selection if you consult Chapter 5 to learn a bit about how the body works, and how a pathogen can cause different symptoms in different areas of the body.

Some common frequencies that are often implicated in a majority of symptom pictures include 464, 660, 690, 727.5, 776, 787, 802, 880, 1550, 1552, 2008, 2127.5, and 2489. Other important frequencies are 20, 72, 95, 125, 444, 600, 625, 650, 784, 832, and 1865. If your machine has a sweep function (explained earlier in this chapter), try a sweep from 420 Hz to 482 Hz.

If you feel too ill to troubleshoot, if you find it too inconvenient or time-consuming, or if you have a condition such as cancer that requires absolute precision, consider using an electrode unit called the F-Scan. The F-Scan sends a series of signals into the body. Then, based on the body's response of resonance, the device displays on a screen those frequencies that are *hits*. Then it delivers those frequencies. The F-Scan can transmit frequencies in the high KHz (kilohertz) range, which is optimal for cancer and some parasitic infections. Due to the high range output, the current is felt very little, if at all.

The end of this chapter has a guide to giving yourself a rife session. Also see Chapter 5, the Frequency Directory, which contains an extensive alphabetized listing of pathogens, diseases and symptom pictures.

One more thing. By enhancing your knowledge and ability to think holistically, to a great extent you can be your own diagnostician and healer. Some people feel uneasy about being proactive about their own health. They think, “But my doctor is the expert. I’m just a layperson. How can I possibly know what to do?” While I respect the grueling program and years of study required of physicians, I’m also aware of the limitations of that training. Most doctors are taught to focus on pathology rather than on optimal function. They are given illness training, not wellness training. As a result, they often fail to comprehend the body as a functional organism of interdependent systems. In these pages, you can acquire practical knowledge and an understanding of relationships and concepts that many conventionally trained doctors lack. So don’t devalue what you already know, and be open to learning more. You may have more choices of treatment modalities than you’ve been led to believe.

**Everything you’ll
ever need to know
is within you; the
secrets of the universe
are imprinted on the
cells of your body.**

—Dan Millman
American author
(born 1946)

Q. Is muscle testing a valid way to figure out which frequencies will work for me?

A. With a little training, muscle testing (also called Applied Kinesiology) can accurately determine which frequencies the body needs. Many people who use this procedure correctly are chiropractors and other health practitioners. However, laypersons and those who specialize in the art of dowsing can also be successful. The trick is to quiet the conscious mind—full of doubting, busy chatter—so that the neurological responses to the electromagnetic information can be detected. (For more information see, on page 575, the question “How were the frequencies in *The Rife Handbook* calculated?” and, on page 576, the Sidebar “Dowsing and Muscle Testing.”) Alternatively, you can tune into your gut; see Sidebar, “You Know More Than You Think.”

Be aware that there are some variables—including dehydration, reversed polarity, and a lack of objectivity on the part of the tester—that can make it challenging to master the technique. In the aforementioned pages, some books are suggested that will help you learn.

There’s another, related frequency checking method you can try, although it can’t be done alone by the subject and requires a tester. It’s based on an objective physiological response called the Vascular Autonomic Signal (VAS), discovered by medical doctor Paul Nogier in 1966. The method involves the circulatory (radial) pulse on the wrist, which can be found with a little practice. The tester holds the subject’s wrist while the subject is exposed to a frequency. When a frequency is emitted that the body may need, a sudden change occurs in the pulse. The change in the pulse can feel like excitation (jumping or throbbing), or weakening (slower, less obvious). This VAS test may be the most practical for those without access to either custom designed frequency programs or a powerful microscope that can show changes in the blood before and after the administration of frequencies. This method may also be preferred by people who find muscle testing difficult.

There’s always the “try this and see how you feel” method. While this method is admittedly limited, some people have reported good results by simply guessing or using their intuition.

Q. Instead of individual frequencies, why can’t we use all of them in succession—especially if we don’t know which ones are needed?

A. People have differing opinions about this general approach. Some rifers want to ensure that all possible pathogenic mutations are covered, so they use all the frequencies they can think of. Other rifers feel that this method isn’t efficient, and not necessarily even the most effective. Believing that the body will become overwhelmed, they prefer a more targeted approach. I have heard positive reports about “all frequencies” units, so let your own unique response guide you.

Q. Why are different frequencies sometimes listed for the same condition? And why are the same frequencies often given for two different pathogens?

A. Assuming that the numbers are correct, when the listings contradict each other by a few Hz, this may reflect differences between the human hosts. Body moisture, tissue density, terrain (biochemical composition and pH), temperature variations, and even different geographical locations can create varied strains of the same pathogen, thus causing changes

APPENDICITIS

See under **GASTROINTESTINAL TRACT, Colon / Large Intestine**.

APPETITE, EXCESSIVE OR LACK OF

Appetite abnormalities have several probable, deeper causes. Check for depression and serotonin deficiency. See **BLOOD SUGAR PROBLEMS**; *Candida albicans* under **CANDIDA, FUNGI, MOLDS AND YEASTS**; **BRAIN AND NERVOUS SYSTEM, MIND AND EMOTIONS**; **PARASITES, PROTOZOA AND WORMS**; **GLANDS, Thyroid**; and **GLANDS, Adrenals**.

ARM PAIN

See “Neuralgia, Brachial” under **BRAIN AND NERVOUS SYSTEM, MIND AND EMOTIONS**.

ARTERIAL SPASM

See “Intermittent Claudication” under **HEART, BLOOD AND CIRCULATION**.

ARTERIOSCLEROSIS

See under **HEART, BLOOD AND CIRCULATION**.

ARTERY, DILATION OF

See “Aneurysm” under **HEART, BLOOD AND CIRCULATION**.

ARTHRITIS

Arthritis (sometimes called “arthrosis” or “arthrangia”) simply means “swelling in the joints.” Inflammation and pain are linked to stress and weak immunity. The source of stress could be toxins such as vaccines, emotional distress (often anger), infection, allergies, overweight, excessive or improper use of joints and muscles, poor posture, metabolic imbalance, or injury. Common to all or most of these stressors is waste, which can come from many sources. Just a few sources are vaccines (which contain toxic chemicals and pieces of pathogens that invade the host’s DNA); emotional distress (which causes acidic stress hormones to pour into the blood, on which bacteria feed); or even metabolic imbalances (to preserve the pH integrity of the bloodstream, the body may deposit accumulated wastes in the joints). The injury type of arthritis can result from rupture of a tendon, ligament, muscle, or joint (the rubbery cartilage cushion between bones). Pathogens involved may be those responsible for rheumatic fever, gonorrhea, tuberculosis, or (according to some research) German measles. Some bacteria produce calcium phosphate shells to protect themselves and hide from the host’s immune cells. If these lumps of crystallized calcium lodge in the joints and muscles, we suffer from arthritis.

Even after one recovers from an illness, subclinical levels of harmful microbes may lie dormant, erupting when the systemic terrain is once again favorable to their repopulation. If you feel that you never completely recuperated from a particular illness; if you observed ill effects from vaccines; or if you were vaccinated and felt no ill effects but are still concerned about the possible mutation of the inoculation microbes into more virulent ones, you can use frequencies as a prevention against arthritis.

Avoid fake foods and adulterated dairy (see Chapter 3, **Food**). Eliminate all nightshades (tomatoes, eggplant, white potatoes, tobacco, bell and hot peppers). In some individuals, these plants hinder the metabolism and absorption of calcium and phosphorous, leading to inflammation, muscle spasms, pain, and stiffness due to deposits in connective tissue, damage to ligaments and tendons, mineralization on the walls of major arteries and veins, and changes in bone density. Studies show that over 70% of subjects saw moderate to significant improvement after removing nightshades. If you do eat them, you can minimize their effects by supplementing with calcium, magnesium, and Vitamin K2 during the meal.

When rifting for specific joints, use a pad device. Place electrode patches on either side of the affected area. Also try, for arthritis and any other type of pain, the Magnetex[®]. The magnetic vortex it creates literally pulls debris out of the tissues (see Appendices A and C for details). Massage only between flare-ups—otherwise, the tissue will become irritated. Moderate exercise grows capillaries and builds circulation. On painful areas, try heat or ice, whichever feels better. Drink plenty of clean water.

Also see **BACTERIA**, “*Mycoplasma*, many types,” as these pathogens have often been found in the blood of people with various forms of arthritis. Worms are implicated in arthritis, so also see, under **PARASITES, PROTOZOA AND WORMS**: “*Ascaris lumbricoides* / Roundworm,” “Hookworm, probably *Necator americanus*,” “*Strongyloides stercoralis* / Threadworm,” and “*Trichinella spiralis* / Trichinosis.” Frequencies alone won’t eliminate worms; so see other modalities (including herbs and color therapy), also in that section. Also see **CARTILAGE PRESERVATION**. And see **VIRUSES**, “*Rubella* / German Measles / 3-Day Measles,” as a high percentage of children with juvenile arthritis may harbor this pathogen.

First try: 2720 (for pain), 40K (for cell restoration).

Then try (from Jimmie Holman. These frequencies may work only on equipment made by Pulsed Technologies): 30720, 30784, 38400, 40K (for as long as desired), 40960, 41600, 43520, 43712, 44032, 46528, 48K, 49024, 49600, 49664, 50368, 51200, 51328, 53248, 56320

Then try (also from Holman): 31539, 32K, 32768, 38461, 38502, 42240, 44160, 46592, 49280, 50816, 51328, 56320, 57344, 58880

Then try (some of these are from Michael Tigchelaar): 1.2 + 250, 1.5 (for 10 minutes), 3 + 230, 7.69, 7.7, 9.39, 9.4, 9.6, 10, 20, 25, 26, 28, 30, 40, 60, 76.9, 80, 93.9, 96, 100, 120 (for 20 minutes), 120, 150, 727, 512, 600 + 625 + 650, 660 + 690 + 727, 683, 688, 766, 770, 776, 787, 802 + 1550, 1664, 800, 880, 962, 1500, 1664, 2720, 3K, 3176, 5K, 10K

Ankylosing Spondylitis / Bechterew’s Disease

A degenerative inflammatory condition of the spine and adjacent soft tissues, and often the hip and shoulder joints, causing pain and sometimes fever, anemia and fatigue.

1.2 + 250, 7.69, 7.7, 10, 28, 35, 60 + 100, 95, 110, 428, 600 + 625 + 650, 680, 660 + 690 + 727, 776, 787, 802 + 1550, 880, 3K, 40K

What Is Arthr-itis?

Medical terms for the layperson

During my first quarter of graduate school, I had to take a course in medical terminology. As I found out early on, chiropractic school was not much different from medical school. We had to learn to diagnose and, interestingly enough, terminology was the key to diagnosis.

One of the first words we learned in that class was the term “-itis.” *Itis* is Latin for “inflammation of.” Other terminology included some words that probably sound familiar to you:

- ◆ *Arthro* means *joint*.
- ◆ *Stoma* means *stomach*.
- ◆ *Bursa* is short for the *fluid-filled sack* in many joints.
- ◆ *Fibro* means *muscle fiber*.
- ◆ *Mya* means *muscle*.
- ◆ *Cepha* means *head*.
- ◆ *Tendons* connect bones.
- ◆ *Ligaments* connect muscles to bones.

My classmates and I often laughed as we learned these words because we realized the vast majority of medical diagnoses weren’t actually “diagnoses” at all, but merely turning the name into Latin or something fancy to impress our patients. It’s also done . . . to make an impact on the patient so they’ll be satisfied they have a diagnosis. So if you’re told you have “arthr-itis,” “tendon-itis,” “burs-itis” or “stomat-itis,” it means your joint, tendon, bursa sack or stomach hurts. Doctors can then follow medical protocol and write a prescription to give you drugs that will hopefully ease the pain.

“Algia” is another interesting one that means *pain*. Therefore, “Cephalgia” is a *headache*. The oft-used diagnosis, “Fibromyalgia,” means *muscle fiber pain*.

There’s one very serious problem with diagnosing: People feel they have a “condition.” Everyone knows, once you have a “condition,” you always have a “condition.” . . . [However,] Arthritis, tendonitis and fibromyalgia are not death sentences. They’re merely Latin terms, combined with fancy medical English phraseologies, for pains doctors don’t understand and conditions for which they have no effective treatment. . . . Most doctors are only diagnosing and treating side effects, not the true cause of the problem. . . .

The most common form [of arthritis that] conventional medicine treats—they refer to it as “old age” arthritis—is . . . called “osteo-arthritis” (“osteo” means *bone*, so isn’t that name hilarious!). When someone says his or her right knee has arthritis because, “I’m old,” here’s how I typically respond: “Really, how old is the other knee?” Properly functioning joints don’t degenerate.

Arthritis is an “inflamed joint.” The joints are created by ends of bones meeting. At this point, they are

cushioned by cartilage. The knee, hip, shoulder and other bigger joints have a fluid-filled sac called a bursa (“burs-itis”). The inner lining of the joint has a grease-like fluid called synovial fluid which reduces friction and allows for freedom of movement. If the joint begins to malfunction, this is often coupled by a loss of synovial fluid that would aggravate the bones meeting in the joint.

When joints become arthritic, swelling causes stiffness, rigidity and tissue damage. The body will warn you with pain if the joint moves beyond its present limits. It’s a vicious cycle because, as mobility decreases, the muscles surrounding the joint also weaken and deteriorate, allowing for further damage to the joint. Eventually, you can have cartilage, ligament and tendon damage, as well as further bone erosion.

If these joints are functioning normally and well cared for, however, they just don’t “itis.” . . . Common medical wisdom is that if you have arthritis, essentially you’re doomed. This could not be farther from the truth. The body does heal.

Arthritis is due to a physical or chemical irritant in a joint or the system. If the cause of this irritation is avoided, removed or corrected, your body has a chance to heal. . . .

The majority of carbohydrates, particularly refined carbohydrates, can aggravate and even cause degeneration. Excess acids in the system do exactly what they sound like they do: They deteriorate and damage cells. Additionally, the body’s survival mechanism will attempt to neutralize these acids. (Calcium from bone is an exemplary acid neutralizer.) Therefore, as you consume sugar, flours, grains and other refined carbohydrates, your blood stream ends up in acid overload and you actually give yourself degenerative arthritis. Dairy and caffeine are two additional major acid culprits. . . .

Think of the tires on your car. When they’re misaligned, they wear unevenly. The musculoskeletal system operates the same way. . . . The vast majority of people in today’s culture have muscular imbalance. . . . [as well as] postural imbalance. . . .

Structurally, the only person you can go to is a chiropractor. The job of a chiropractor is to balance posture and correct misalignment in the spine and other joints. . . . Chiropractic rehabilitative exercises are actually designed to cause “regeneration,” the reversal of arthritis and rehydration of discs. . . .

Arthritis is not a terminal disease. If that’s what you’ve been told, fire your doctor.

—Ben Lerner, DC, 2010

arthritis-cats-dogs.com/article-detail.php?ID=152

Cats Give Themselves Rife Sessions

Why do cats purr? . . . [They purr when they're] . . . content. . . . frightened, severely injured, giving birth and even while dying. For the purr to exist in different cat species over time, geographical isolation, etc., there would likely have to be something very important (survival mechanism) about the purr. There also would have to be a very good reason for energy expenditure (in this case creation of the purr) when one is physically stressed or ill. The vibration of the cat's diaphragm, which with the larynx, creates the purr, requires energy. If an animal is injured they would not use this energy unless it was beneficial to their survival. . . .

Most people have heard of a cat's "nine lives." There is also an old veterinary adage still repeated in veterinary schools which states, "If you put a cat and a bunch of broken bones in the same room, the bones will heal." Any veterinary orthopedic surgeon will tell you how relatively easy it is to mend broken cat bones compared with dog bones, which take much more effort to fix, and take longer to heal. There is excellent documentation of the cats' quick recovery from . . . [falling from] high-rise [buildings]. . . . [Researchers] documented 132 cases of cats plummeting many stories from high rise apartments (average 5.5 stories), some suffering severe injuries. . . . 90% of these cats survived. . . . There is another clue found in a study performed by Dr. T.F. Cook (1973), "The Relief of Dyspnoea in Cats by Purring," in the *New Zealand Veterinary Journal*. A dying cat who could not breathe (they were considering euthanasia) was found to breathe normally once it began purring. The purring opened up the cat's airway, and improvement was "remarkable and the next day [the cat] commenced to eat. . . ." Three species of cats have a strong harmonic at exactly 100 Hz, the vibrational frequency found to relieve dyspnea; one species [is] within 2 Hz and one species within 7 Hz of 100 Hz. It could be that the cat's purr decreases the breathlessness by vibratory stimulation.

Fauna Communications has recorded many cats' purrs at a non-profit facility and the Cincinnati Zoo, including the cheetah, puma, serval, ocelot and the domestic house cat. After analysis of the data, we discovered that:

- ◆ The dominant and fundamental frequency for three species of cats' purrs is exactly 25 Hz or 50 Hz, the best frequencies for bone growth and fracture healing. All of the cats' purrs all fall well within the 20–50 Hz . . . range, and extend up to 140 Hz. All the cats except the cheetah have a dominant or strong harmonic at 50 Hz.
- ◆ The harmonics of three cat species fall exactly on or within two points of 120 Hz which has been found to repair tendons. One species [is] within 3 Hz and one within 7 Hz.

- ◆ Eighteen to thirty-five Hz is used in therapeutic biomechanical stimulation for joint mobility. Considering the small size of many of these cats, especially the domestic cats, it is interesting to note that all of the individual cats have dominant frequencies within this range. In fact, some of the cats have two to three harmonics in this range.
- ◆ The frequencies for therapeutic pain relief are from 50–150 Hz. All of the individual cats have at least five sets of strong harmonics in this range.
- ◆ Therapeutic frequencies for the generation of muscle strength [are from] 2–100 Hz. All of the individual cats have at least four sets of strong harmonics in this range.
- ◆ Therapy for COPD [Chronic Obstructive Pulmonary Disease] uses 100 Hz; all of the individual cats have a dominant frequency of exactly 100 Hz.

Is it possible that evolution has provided the felines of this world with a natural healing mechanism for bones and other organs? Researchers at Fauna Communications believe so.

Being able to produce frequencies that have been proven to improve healing time, strength and mobility could explain the purr's natural selection. In the wild when food is plentiful, the felids are relatively sedentary. They will spend a large portion of the day and night lounging in trees or on the ground. Consistent exercise is one of the greatest contributors to bone, muscle, tendon and ligament strength. If a cat's exercise is sporadic, it would be advantageous for them to stimulate bone growth while at rest. . . . Therefore, having an internal vibrational therapeutic system to stimulate healing would be advantageous, and would also reduce edema and provide a measure of pain relief during the healing process.

In summary: vibrations between 20 Hz and 40 Hz are therapeutic for bone growth/fracture healing, pain relief / swelling reduction, wound healing, muscle growth and repair, tendon repair, mobility of joints and the relief of dyspnea. . . . Cats do not have near the prevalence of orthopedic disease or ligament and muscle traumas as dogs do. . . . [Also, the] non-union of fractures in cats is rare. Osteo [bone] diseases . . . are rarely found in cats but can be found in all breeds and sexes of dogs. . . . It is suggested that purring be stimulated as much as possible when cats are ill or under duress. If purring is a healing mechanism, it may just help them to recover faster, and perhaps could even save their [lives].

—Elizabeth von Muggenthaler
 excerpted from "The Felid Purr: A bio-mechanical healing mechanism," 2001 and 2006

KNEE PAIN

See under **ARTHRITIS** or **INJURIES**.

KURU

See **PRIONS / AMYLOIDOSIS**.

-L-

LARGE INTESTINE / COLON DISORDERS, ALL

See under **GASTROINTESTINAL TRACT**, *Colon / Large Intestine*.

LARYNX CONDITIONS, ALL, INCLUDING LARYNGITIS

See under **RESPIRATORY TRACT**, *Vocal Cords*.

LATERAL SCLEROSIS

See “Amyotrophic Lateral Sclerosis (ALS)” under **BRAIN AND NERVOUS SYSTEM, MIND AND EMOTIONS**.

LAXATIVE EFFECT

See under **GASTROINTESTINAL TRACT**, *Systemic Conditions*.

LEAKY GUT SYNDROME

See under **GASTROINTESTINAL TRACT**, *Small Intestine*.

LEG CRAMPS CAUSED BY ARTERIAL SPASM

See “Intermittent Claudication” under **HEART, BLOOD AND CIRCULATION**.

LEGIONNAIRE’S DISEASE

See “*Legionella pneumophila* / Legionellosis / Legionnaire’s Disease / Pontiac Fever” under **BACTERIA**.

LEISHMANIA, ALL TYPES

See under **PARASITES, PROTOZOA AND WORMS**.

LEMIERRE’S SYNDROME

See under **RESPIRATORY TRACT**, *Throat and Lymph Nodes*.

LEPROSY

See “*Mycobacterium leprae* / Leprosy / Hansen’s disease” under **BACTERIA**.

LEPTOSPIRA / LEPTOSPIROSIS

See under **BACTERIA**.

LESIONS, ORAL

See “Oral Lesions” under **DENTAL**, *Mouth and Gums*.

LEUKEMIA, ALL KINDS

See under **CANCER**.

LEUKOCYTOSIS

See under **CANCER**.

LEUKODERMA

See under **SKIN**.

LEUKOENCEPHALITIS

See under **BRAIN AND NERVOUS SYSTEM, MIND AND EMOTIONS**.

LEUKOPLAKIA

See under **DENTAL**, *Mouth and Gums*.

LEUKORRHEA

See “Vaginitis” under **WOMEN**, *Vagina, Labia and Clitoris*.

LEUKOSIS

See “Leukocytosis / Leukosis” under **CANCER**.

LIGAMENT SPRAIN

See under **INJURIES**.

LIGHT SENSITIVITY

See “Photosensitivity” under **EYES**.

LIPOMA

See under **LIVER AND GALLBLADDER**, *Liver*.

LISTERIA MONOCYTOGENES / LISTERIOSIS

See under **BACTERIA**.

LIVER AND GALLBLADDER

The liver and gallbladder are complementary in function: they work together to aid digestion. In Chinese medicine, they share the same meridian. So, it’s not surprising to learn that they both grew from the same embryonic tissue that divided. One portion of tissue branches to form the liver, and the other branches to form the gallbladder.

Liver

The soft, pinkish-brown liver—weighing between 3 and 6½ pounds (1.3 to 3 kilograms)—is the second largest organ (the skin is the first). Located on the right side in the abdominal cavity just below the diaphragm, this remarkable organ has many jobs. It’s the waste disposal workhorse, detoxifying poisons and preventing them from recirculating through the bloodstream. It breaks down, or converts for the body’s use, pancreatic, thyroid, sex gland, and other hormones. It stores vitamins and minerals and activates Vitamin E. It helps with immune protection by producing antibodies (which help eliminate pathogens). When there’s too much glucose in the bloodstream, the versatile liver converts it to glycogen. However, if there’s too much glucose at one time for the liver to convert, the glucose gets stored as body fat.

The liver helps digest carbohydrates and proteins, but it’s best known for making bile to digest fats. It makes small amounts of bile at a time. What’s not needed immediately in the small intestine during a meal is stored in the gallbladder. Fatty foods burden a poorly functioning liver, requiring bile supplements—especially if the

Another type of amyloid protein that's improperly folded, and lacks a nucleus and nucleic acid, is a prion (from the phrase "proteinaceous infectious particle"). Its lack of a nucleus causes scientists to call it "unalive," but it still reproduces. Prions are almost impossible to kill or neutralize. They cannot be deactivated with heat (even the high-pressure steam heat of an autoclave), or with ammonia, bleach, hydrogen peroxide, alcohol, phenol, lye, formaldehyde, or radiation. Moreover, prions can remain in soil and other areas for years. After folding into abnormal shapes, they cause nearby normal molecules to abnormally structure themselves as well.

Prions are most often associated with fatal brain diseases, notably sheep scrapie, Bovine Spongiform Encephalopathy (BSE or Mad Cow disease), and Creutzfeldt-Jakob disease (CJD) in humans. A famous prion disease called kuru spread in New Guinea when cannibals ate the brains of those already infected with the disease. Kuru stopped spreading after the practice of cannibalism was discontinued. In the 1990s, BSE spread in Europe when meat and meat byproducts from infected animals were fed to other animals.

The late English organic farmer Mark Purdy believed that prions may result from, rather than cause, damaged tissue because Mad Cow and BSE don't exist in organically raised cattle, or in healthy deer and elk. It's true that healthy animals are more resistant, but some types of prions may in fact be infectious. It's also possible that the Lyme spirochete and other pathogens make the brain more susceptible to becoming infected by (or forming) prions.

According to Dr. Richard Loyd, prions can be removed by either an extract of olive leaf, hydrangea, dandelion and cat's claw, or an extract of elecampane and echinacea. He has also provided the following frequencies.

70, 90, 120, 230, 515, 656, 750, 930, 956, 1106.25, 1214.08, 1378.44, 1525, 1545.9, 1609.375, 1630.86, 1693.36, 1812.5, 1886.25, 1943.65, 1950, 1956.4, 1972.66, 2011.7, 2115.23, 2187.5, 2262.8, 8850, 125210, 15090, 17500, 24400, 29K, 44110, 412K, 417500, 433500, 505K, 72410, 541500, 621610, 791500, 995150

PROCTITIS

See under **GASTROINTESTINAL TRACT**, *Colon / Large Intestine*.

PROSTATE CANCER

See under **CANCER**.

PROSTATE CONDITIONS

See under **MEN**, *Prostate*.

Always use 40K to revitalize the cells.

Use it for as long as you want.

PROTEIN SENSITIZATION

See **SERUM SICKNESS / ANAPHYLAXIS / PROTEIN SENSITIZATION**.

PROTEUS VULGARIS AND MIRABILIS

See under **BACTERIA**.

PROTOMYXOZOA RHEUMATICA

See "*Funneliformis mosseae*" (its new name) under **CANDIDA, FUNGI, MOLDS AND YEASTS**.

PROTOZOA, ALL TYPES

See **PARASITES, PROTOZOA AND WORMS**.

PRURITUS

See "Anus, Itching / Pruritus" under **GASTROINTESTINAL TRACT**, *Colon / Large Intestine*.

PSEUDOMONAS, ALL STRAINS

See all under **BACTERIA**.

PSITTACOSIS

See "*Chlamydia psittaci* / Parrot Fever / Ornithosis / Psittacosis" under **BACTERIA**.

PSORIASIS

See under **SKIN**.

PSYCHOSOMATIC PAIN

See under **BRAIN AND NERVOUS SYSTEM, MIND AND EMOTIONS**.

PULMONARY FIBROSIS / FIBROSIS / IDIOPATHIC PULMONARY FIBROSIS

See under **RESPIRATORY TRACT**, *Lungs*.

PUS INFECTION

See "*Pseudomonas aeruginosa*" under **BACTERIA**.

PYODERMA (OR PYODERMIA) GANGRENOSUM

See under **SKIN**.

PYORRHEA

See "Gingivitis / Gum Inflammation and Infection" under **DENTAL**, *Mouth and Gums*.

—Q—

Q FEVER

See "*Rickettsia* / Q Fever" under **BACTERIA**.

QUINTAN FEVER

See "*Bartonella quintana* / Bartonellosis" under **BACTERIA**.

-R-

RABBIT FEVER

See “*Francisella tularensis* / Tularemia / Rabbit Fever / Deer Fly Fever” under **BACTERIA**.

RABIES

See “Lyssavirus / Rabies” under **VIRUSES**.

RADIATION BLOCKER

This was found by an experienced rifer to nullify radiation emissions from a nearby electrical power plant. This works with a radiant plasma unit only, and it must be kept on for the period during which you require protection. The frequency must be exact. However, keep in mind that this is experimental! Also see **SCHUMANN RESONANCES**.

889.5

RADIATION BURNS, INCLUDING MOST OTHER TYPES OF BURNS

190, 200, 465, 660 + 690 + 727, 787, 880, 10K, 40K (for as long as desired)

RADIATION, TO DETOXYFY

See **CHEMICAL SENSITIVITY / POISONING**. Also see **Detoxification** and **Sauna Therapy** in Chapter 3.

RAGWEED ALLERGY

473

RAYNAUD’S DISEASE

See under **HEART, BLOOD AND CIRCULATION**.

RECTUM, BLEEDING

See “Hemorrhoid” under **GASTROINTESTINAL TRACT, Colon / Large Intestine**.

REFLEX SYMPATHETIC DYSTROPHY (RSD)

See under **MUSCLES** or **BRAIN AND NERVOUS SYSTEM, MIND AND EMOTIONS**.

REFLUX ESOPHAGITIS

See “Acid Reflux / Gastro-Esophageal Reflux Disease (GERD)” under **GASTROINTESTINAL TRACT, Stomach and Esophagus**.

REGENERATION AND HEALING

Although Royal Rife publicly stated that frequencies destroy pathogens, many experimenters today use frequency devices to heal and regenerate tissue. This makes sense. Organisms generate an electromagnetic field, electricity, magnetism—electricity and magnetism are sub-units of an electromagnetic field—scalar waves, and probably other unknown energies too. Electromedicine researchers know that applying the right type of electromagnetic field, electrical current, or

magnetism to the body helps cells repair. Once nutrients freely enter and wastes leave the cells, tissues function.

Both contact and non-contact equipment are used for regenerating cells. Rifers use an EM+ machine, which, like the BCX Ultra, has hand-held plasma tubes (applied to the targeted area) and a stainless steel grounding plate (often placed opposite the targeted area). You can use any electrode (pads) unit, placing the electrodes where they’re needed. Front/back, side/side, and top/bottom positions are common. Patch electrodes—sticky, area-specific patches that adhere to the skin—are useful for this application. Other frequency devices good for cellular rejuvenation include the radiant plasma PERL M+ from Resonant Light, and any of the units from Pulsed Technologies.

The Magnetex[®], Avazzia[™], and Biotransducer[®] (used with the Tennant Biomodulator[®]) are also excellent choices. The VitaSet Generator (VSG) from Pulsed Technologies, which emits regenerative Schumann frequencies, helps with any type of healing. See Appendix A for contact information on the manufacturers, and Appendix C for more details about how the equipment works.

Make sure your nutrient intake is sufficient. This includes good (not fake) fats, minerals, and plenty of clean water. You can use all the frequency therapies in the world, but if your body lacks the raw materials to build new, viable cells, the benefits you receive from any therapy will be limited.

Also see **SCHUMANN RESONANCES**, as well as applicable entries under **BRAIN AND NERVOUS SYSTEM, MIND AND EMOTIONS**. Most of the frequencies below are from Bruce Stenulson.

General, Highly Effective—First Choice

I have had extensive experience with 40K, which is mathematically related to the popular 10K but works much better. This frequency has allowed me to still feel refreshed and energized at the end of long, 12-hour work days of teaching and being in contact with thousands of people. Rifers have reported a lessening or complete elimination of various symptoms, including pain and sleeplessness.

40K

General, More

Basic short set: 47, 2720 (this is used for pain; run for at least 30 minutes), 2489

General Organ / Gland Support

From Jimmie Holman.

Primary: 23958, 24354, 28251, 29766, 32121, 32670, 36735, 38280, 40K, 44505, 44583, 45549, 45738, 54531, 56133, 56376, 57519, 58806, 63336, 67977, 71874, 84942, 86394, 87000, 89298

Secondary: 20088, 22386, 27144, 44505, 45927, 46683, 48642, 49329, 56889, 57591, 57599, 60501, 60507, 67512, 67518, 68904, 87846, 90885, 91260, 91719

Nutrients and Supplements for Inflammation

- ◆ ***Boswellia serrata* (Indian Frankincense).** Herb with potent anti-inflammatory effects.
- ◆ **Chondroitin sulfate.** Found in cartilage. Promotes moisture retention and elasticity. Inhibits enzymes that break down cartilage. In bone broth too.
- ◆ **Protease, Pancreatic, Serrapeptase, Nattokinase, Lumbrokinase Enzymes.** Anti-inflammatory. Used by white blood cells to break down waste products. Take on empty stomach so intact enzymes reach bloodstream instead of being used to digest food.
- ◆ **Glucosamine sulfate.** Found in cartilage. Promotes its formation and repair. In bone broth too.
- ◆ **Magnesium.** Vital mineral involved in many functions. Relaxes muscles. Different types of magnesium have an affinity for different body areas, so take all; most people are deficient. Onto sore muscles and joints, rub magnesium "oil." You can make it yourself. Half fill jar with magnesium chloride flakes (also called *nigari*, used to make tofu). Keep adding water; shake jar until flakes dissolve and solution is saturated. Bypasses digestive tract, reaches body areas instantly.
- ◆ **Proline-Rich Polypeptides.** Also known as transfer factors. Modulates immunity: stimulates lax immune function and calms hyperactive immune cells.
- ◆ **Turmeric.** Gold-colored root used in Indian cooking. Anti-inflammatory, immune-protective, anticancer.

Arthritis related to Gout

Gout is a metabolic disease of excessive uric acid in the blood. Avoid fructose (see Chapter 3, **Food**). Also see **GOUT**.

9.39, 9.4, 20, 660 + 690 + 727, 787, 880, 3K, 10K, 40K

Arthritis related to Nervous System Paralysis

9.39, 9.4, 10K

Arthritis related to Stomach Infection

9.39, 9.4, 10K

Arthritis related to Tonsil Infection

9.39, 9.4, 10K

Arthritis with Parathyroid Disturbances

Parathyroid disturbances affect calcium metabolism and cause either an excess or deficiency of calcium.

First try: 9.6, 10K

Then try: 326, 328, 4760.5, 673.1, 771, 40K

Bunion

Inflammation and thickening of joint, often in big toe.

20, 10K, 2720, 40K

Bursitis

Inflammation of connective tissue, mainly around joints. May be caused by a great many organisms. Also experiment with the arthritis, tendomyopathy, and sprain frequencies. Because white blood cells require enzymes to break down the waste products of inflammation (as well as infection), taking enzyme supplements on an empty stomach may help.

660 + 690 + 727, 787, 880, 10K, 40K

Elbow Pain / Epicondylalgia

1.2 + 250, 26, 160, 3K, 10K

Fluid in Joints and Tissues, to Reduce Excess Amounts

15, 24.3

Hip Pain

20, 660 + 690 + 727, 787, 880, 2720, 10K, 40K

Knee Pain

See a chiropractor to rule out subluxation or other structural causes.

1.2 + 250, 3 + 230, 7.69, 7.7, 9.39, 9.4, 9.6, 20, 28, 73, 160, 660 + 690 + 727, 787, 802 + 1550, 880, 2720, 3K, 40K

Osteoarthritis

The most common form of arthritis in the United States. Symptoms usually build up gradually. In the early stages, joints may ache after physical work or exercise. Repetitive injury and physical trauma can exacerbate the condition. Older and overweight people are especially susceptible, as are women after menopause.

Cartilage is a rubbery substance in the body that cushions the bones and help the joints move easily and smoothly. Osteoarthritis begins with the erosion of cartilage between the joints of fingers, knees, hips, and spine. As cartilage breaks down, the ends of the bones thicken, may knock against each other—giving the person a “crunching” feeling or the sound of bone rubbing on bone when the joint is used—and the joint may lose its shape. Bony protrusions may start to grow where they don’t belong. Damaged joint tissue can also cause the release of biochemicals called prostaglandins, which can add to the pain and swelling.

Other symptoms include steady or intermittent pain in a joint, stiffness after periods of inactivity, swelling, and tenderness. The wrists, elbows, shoulders, and ankles can also be affected. If this condition occurs in a joint not commonly affected, there is usually a history of injury or unusual stress to that joint. Toxins excreted by bacteria into the joints also cause pain.

From Jimmie Holman (in this order): 49280, 48K, 30784

Also try: 15, 324, 326, 528, 770, 1500, 40K

Use 512 along with the other frequencies you need.

to the body's immune response, are the biochemical agents against specific pathogenic or foreign antagonists in the body. The spleen also breaks down bacteria and worn-out or damaged blood cells, and creates new blood cells.

Also see lymph frequencies under **RESPIRATORY TRACT, Throat and Lymph Nodes**.

20, 27.44, 35, 465, 660 + 690 + 727, 787, 802 + 1550, 880, 1800, 2170, 2720, 3176, 10K, 40K (for as long as desired)

SPONDYLITIS, ALL TYPES

See "Ankylosing Spondylitis / Bechterew's Disease" under **BONE AND SKELETON**.

SPOROTRICHUM PRUINOSUM

See under **CANDIDA, FUNGI, MOLDS AND YEASTS**.

SPRAIN

See under **INJURIES**.

SPUR, BONE

See under **BONE AND SKELETON**.

SQUAMOUS CELL CARCINOMA

See "Skin Cancer / Squamous Cell Carcinoma / Basal Cell Carcinoma" under **CANCER**.

STACHYBOTRYS CHARTARUM

See under **CANDIDA, FUNGI, MOLDS AND YEASTS**.

STAMMERING

See under **BRAIN AND NERVOUS SYSTEM, MIND AND EMOTIONS**.

SUICIDAL TENDENCIES

See under **BRAIN AND NERVOUS SYSTEM, MIND AND EMOTIONS**.

STAPHYLOCOCCUS / STAPH, MANY STRAINS (INCLUDING MRSA)

See under **BACTERIA**.

STEMPHYLIUM

See under **CANDIDA, FUNGI, MOLDS AND YEASTS**.

STOMACH CONDITIONS, MANY

See **GASTROINTESTINAL TRACT, Stomach and Esophagus**.

STOMATITIS

See "Canker Sores / Stomatitis Aphthous" under **DENTAL, Mouth and Gums**.

STONES, KIDNEY

See "Kidney Stones" under **URINARY TRACT, Kidneys**.

STREP THROAT

See "*Streptococcus pyogenes* / Strep Throat" under **BACTERIA** or "Strep Throat" under **RESPIRATORY TRACT, Throat and Lymph Nodes**.

STREPTOCOCCUS, MANY STRAINS

See under **BACTERIA**.

STREPTOTHRIX

See "*Actinomyces*" entries under **BACTERIA**.

STROKE AND STROKE PARALYSIS / APOPLEXY

See under **HEART, BLOOD AND CIRCULATION**.

STRONGYLOIDES

See under **PARASITES, PROTOZOA AND WORMS**.

STRUMA, ALL TYPES

See "Goiter" under **GLANDS, Thyroid**.

STUDY MODE—TO IMPROVE BRAINPOWER AND ALERTNESS

See under **REGENERATION AND HEALING**.

STYE

See under **EYES**.

SUBLUXATION

See under **BONE AND SKELETON** or **INJURIES**.

SUN, ALLERGY TO

See "Photosensitivity" under **EYES**.

SUNSTROKE AND SUNSTROKE FEVER

Along with the rise in body temperature, symptoms include dizziness, headache, rapid pulse, nausea, and if prolonged, hallucinations, convulsions, and unconsciousness. Lie down, get cooler, drink water, and get medical attention.

20, 95, 146, 190, 428, 440, 444 + 1865, 522, 880, 3K, 10K

SWELLING DUE TO WATER RETENTION

See "Lymphedema / Edema / Dropsy / Water Retention" under **LYMPHATIC SYSTEM**.

SWIMMER'S EAR

See under **EARS**.

SWINE FLU

See under **VIRUSES**.

SWOLLEN GLANDS

See "Glands, Swollen" under **RESPIRATORY TRACT, Throat and Lymph Nodes**.

SYPHILIS

See under **MEN, Penis** or **WOMEN, Vagina, Labia and Clitoris**.

You may not need every frequency in an entry.

To determine which ones you need,
try muscle testing or dowsing (see Chapter 4).

-T-

TACHYCARDIA

See under **HEART, BLOOD AND CIRCULATION**.

TAENIA PISIFORMIS

See under **PARASITES, PROTOZOA AND WORMS**.

TAPEWORM

See under **PARASITES, PROTOZOA AND WORMS**.

TB

See **TUBERCULOSIS, ALL TYPES**.

T CELL LEUKEMIA

See “Leukemia, T Cell” under **CANCER**.

TENDOMYOPATHY

See under **MUSCLES**.

TEETH GRINDING

See “Teeth Grinding / TMJ Problems / Jaw Pain” under **DENTAL, Teeth**.

TENDONS, TO REPAIR

See under **REGENERATION AND HEALING**.

TENDON TEAR

See under **INJURIES**.

TENDONS, RHEUMATOID ARTHRITIS

See “Rheumatoid Arthritis” under **ARTHRITIS**.

TENNIS ELBOW

See under **INJURIES**.

TESTICLE CONDITIONS

See under **MEN, Testicles**.

**TESTOSTERONE LEVELS, TO NORMALIZE
(FOR BOTH MEN AND WOMEN)**

See under **REGENERATION AND HEALING**.

TETANUS

See “*Clostridium tetani* / Tetanus / Lockjaw” under **BACTERIA**.

THALAMUS CONDITIONS

See under **BRAIN AND NERVOUS SYSTEM, MIND AND EMOTIONS**.

THREADWORM

See “*Strongyloides stercoralis* / Threadworm” under **PARASITES, PROTOZOA AND WORMS**.

THROAT CONDITIONS

See under **RESPIRATORY TRACT, Throat and Lymph Nodes**.

THROMBOCYTOPENIC PURPURA

See under **HEART, BLOOD AND CIRCULATION**.

THROMBOPHLEBITIS

See under **HEART, BLOOD AND CIRCULATION**.

THROMBOSIS, ALL KINDS

See under **HEART, BLOOD AND CIRCULATION**.

THRUSH

See under **DENTAL, Mouth and Gums**.

THYMUS GLAND CONDITIONS

See under **GLANDS, Thymus**.

THYROID GLAND CONDITIONS

See under **GLANDS, Thyroid**.

TINEA CRURIS

See “Jock Itch” under **MEN, Penis** or **WOMEN, Vagina, Labia and Clitoris**.

TINEA PEDIS

See “Athlete’s Foot” under **SKIN**.

TINEA VERSICOLOR

See under **SKIN**; or *Malassezia furfur* / *Microsporon furfur* / Tinea Versicolor” under **CANDIDA, FUNGI, MOLDS AND YEASTS**.

TINNITUS

See under **EARS**.

TISSUE HEALING AND REGENERATION

See applicable entries under **REGENERATION AND HEALING**.

TMJ (TEMPOROMANDIBULAR JOINT) PROBLEMS

See “Teeth Grinding / TMJ Problems / Jaw Pain” under **DENTAL, Teeth**.

TOBACCO MOSAIC VIRUS

See under **VIRUSES**.

TONSILLITIS

See “Glands, Swollen” under **RESPIRATORY TRACT, Throat and Lymph Nodes**.

TOOTH CONDITIONS

See under **DENTAL, Teeth**.

TOURETTE’S SYNDROME

See under **BRAIN AND NERVOUS SYSTEM, MIND AND EMOTIONS**.

TOXINS, ALL TYPES—TO ELIMINATE

See **CHEMICAL SENSITIVITY / POISONING**.

TOXOPLASMA CANIS / TOXOCARIASIS

See under **PARASITES, PROTOZOA AND WORMS**.

TOXOPLASMA GONDII / TOXOPLASMOSIS

See under **PARASITES, PROTOZOA AND WORMS**.

TRACHOMA

See under **EYES**. Also see “*Chlamydia trachomatis*” under **SKIN; BACTERIA; URINARY TRACT**; or **WOMEN, Vagina, Labia and Clitoris**.

TRAUMA, GENERAL

See under **BRAIN AND NERVOUS SYSTEM, MIND AND EMOTIONS**. Also see listing pertaining to body part and condition.

TRENCH FEVER

See “*Bartonella quintana* / Bartonellosis” under **BACTERIA**.

TRENCH MOUTH

See under **DENTAL, Mouth and Gums**.

TREPONEMA DENTICOLA, TREPONEMA PALLIDUM

See under **BACTERIA**.

TRICHINELLA SPIRALIS

See under **PARASITES, PROTOZOA AND WORMS**.

TRICHINOSIS

See under **PARASITES, PROTOZOA AND WORMS**.

TRICHODERMIA VIRIDE

See under **CANDIDA, FUNGI, MOLDS AND YEASTS**.

TRICHOMONAS, ALL TYPES

See under **PARASITES, PROTOZOA AND WORMS**.

TRICHOPHYTON, ALL TYPES

See under **CANDIDA, FUNGI, MOLDS AND YEASTS**.

TRIGEMINAL NEURALGIA

See “Neuralgia, Trigeminal” under **BRAIN AND NERVOUS SYSTEM, MIND AND EMOTIONS**.

TRYPANOSOMA BRUCEI GAMBIENSE

See under **PARASITES, PROTOZOA AND WORMS**.

TUBERCULOSIS, ALL TYPES

This very infectious airborne disease, known to affect the lungs, also causes swelling and tumor-like welts of tissue in the intestines and meninges (membrane around the spinal cord). Symptoms may also include fever, cough, and difficulty breathing.

Can be caused by bacteria, viruses, or fungi. The many frequencies so close to each other illustrates the mutation capacity of these pathogens. Experiment with all the frequencies to deal with both the disease and the so-called secondary infections springing from the disease. Run sweeps.

Tuberculosis, General

First try: 21508.01, 2127.5, 1070.82, 660 + 690 + 727

Then try: 20, 216, 221, 333 + 523 + 768 + 786, 465,

532, 590, 720, 740, 776, 784, 787, 799, 800, 801, 802 + 1550, 803, 804, 1132, 1500, 1552, 1600, 1644, 1840, 2008, 2313, 3353, 6516

Mycobacterium avium / Bird Tuberculosis

See “Tuberculosis, Aviare / *Mycobacterium avium* / Bird Tuberculosis” in this section.

Mycobacterium tuberculosis

For more frequencies, see under **BACTERIA**. The rod form, from Royal Rife, possibly used on his #4 machine: 369K

Nigrospora-related Tuberculosis

This fungus is found in the lungs and sinuses, causing TB-type infections and allergies.

302, 350, 764

Tuberculosis, Aviare / Mycobacterium avium / Bird Tuberculosis

Mycobacterium avium causes tuberculosis not only in birds, but sometimes in cattle and other animals. Symptoms of cough, fatigue, fever, weight loss and night sweats can also be caught by humans, particularly those with compromised immune function.

First try: 532 (from Dr. John Garvey), then (all the rest from Dr. Richard Loyd) 455, 303, 332, 342, 438, 440, 529.3, 532, 590, 697, 698, 720, 731, 741, 748, 770, 824.5, 825.7, 860.2, 937.4, 2075, 3113, 6515

Add to above (from Dr. Loyd): 529.3, 608.4, 615.7, 617.8, 619.7, 625.9, 632.2, 642.2, 674.3, 680.4, 680.8, 694.1, 700.9, 769.6, 770.6, 773.3, 786.7, 803.4, 818.5, 830, 857.6, 858.2, 860.2, 896.9, 953.6, 1001.2, 1037.5, 1058.6, 1148.3, 1180, 1235.7, 2117.1, 2471.3, 6784.375
Also sweep 825–830

Also try Clark’s *Mycobacterium* TB-related: 21508.01, 1070.82

Tuberculosis, Bovine

523, 3353 (both from Dr. John Garvey), 229, 600 + 625 + 650, 635, 748, 757, 838, 877

Tuberculosis, from Klebsiella bacterium

221, 1132, 1644, 2313, 6516 (all from Dr. John Garvey), 217, 220, 686, 729, 748, 1644

Tuberculosis, Secondary complications

776, 465, 2008, 2127.5

Tuberculosis Virus

1552, 2565

End of Tuberculosis section.

TULAREMIA

See “*Francisella tularensis* / Tularemia / Rabbit Fever / Deer Fly Fever” under **BACTERIA**.

To help eliminate debris from tumors: 688 Hz

TUMORS, BENIGN

An abnormal enlargement of tissue not caused by swelling. Different types of tumors are composed of different tissue: connective, fatty, fibrous, glandular, lymphatic, mucosal, muscular, nerve, bone, or blood vessel. They are typically round, but can have varied sizes and shapes. Tumor size can range from 1 mm to 50 mm or larger. The body's tendency to form tumors is a deviation from its optimal DNA. Diet can play a part in their formation, especially tumors of the breast. Eliminating chocolate and coffee can make a huge difference in shrinking the tumor or eliminating it entirely.

Spectro-Chrome Color Therapy has been shown to be remarkably successful at eliminating tumors. Don't let its "low tech" simplicity and affordability deter you from using it (see Chapter 3). In case the body has created the tumor to envelop and contain toxins, see **CHEMICAL SENSITIVITY / POISONING**. Get into the sauna. And because benign tumors can become cancerous, watch them—and also see applicable entries under **CANCER**.

Benign, unspecified

From Dr. Richard Loyd: 688

Actinomyces related

In Dr. Richard Loyd's experience, most benign tumors are caused by *Actinomyces israelii*.

From Dr. Richard Loyd: 4262 and 787

Adenoma, Cervical / Cervical Adenoma

Although a tumor in the cervix may be benign, it can become malignant. You are strongly advised to see "Uterine Cancer or Tumor" and other entries under **CANCER**. Also see "Cervical Polyp" in this section.

From Dr. John Garvey: 443

Cervical Polyp

Also see **CANCER**, because benign tumors can grow and become malignant. Also see **WOMEN, Uterus, Cervix, Ovaries and Fallopian Tubes**, "Cervical Adenoma."

689 (from Dr. John Garvey), 277, 288, 687, 744, 867

Cladosporium fulvum

A fungus that causes raised, irregular nodules of soft tissue that can be slow to heal.

438 (from Dr. John Garvey), 233, 344 + 510 + 943, 776

Cholesteatoma

Benign inflammatory tumor usually found in middle ear and mastoid bone region. Also see **CANCER** in case the tumor becomes malignant.

453, 618, 793, 5058

Lipoma

Fatty tumor, usually benign and in clusters, often just under the skin. Establishment medicine doesn't know exactly what causes lipomas, but improper fat metabolism and liver dysfunction are very likely involved. Also see "Liver Cancer" and other entries under **CANCER** in case the tumors become malignant, as well as various entries under **LIVER AND GALLBLADDER, Liver**.

47 (5 minutes), 606 (5 minutes), 709 (5 minutes). Also sweep 2K–2200; or do 2K–2200 in increments of 5 Hz, staying on each number for 30 seconds to 1 minute

Meningioma

Benign, slow growing tumor of the meninges (membranes around brain and spinal cord.) Also see **BRAIN AND NERVOUS SYSTEM, MIND AND EMOTIONS**, "Meningitis."

446, 535, 537

Myoma

See "Uterine Tumor / Myoma" in this section.

Nasal Polyp

Benign growth or tumor inside nasal passage.

542, 1436

Ovarian Cyst

Sac containing a liquid in the ovary.

982 (from Dr. John Garvey), 567, 711

Papilloma Virus Cyst

Certain type of tumor containing skin cells.

6.3 + 148, 110, 264, 634, 760, 762, 767, 848, 874, 907, 917, 1102

Polyp, General

20, 146, 444 + 1865, 465, 522, 600 + 625 + 650, 660 + 690 + 727, 1600, 1800, 2008, 2127.5, 2170, 2489, 2720

Prostate Tumor

Benign tumors can become malignant, so you are strongly advised to also see "Prostate Cancer" under **CANCER**.

20, 60 + 100, 72, 95, 125, 146, 410, 442, 444 + 1865, 465, 522, 660 + 690 + 727, 688, 748, 766, 776, 787, 802 + 1550, 1875, 2008, 2050, 2127.5, 2170, 2250, 2489, 2720

Toxins from the Tumors, to Help Eliminate

688

Uterine Tumor / Myoma

Tumor comprised of muscle tissue. Also see **CANCER**.

453, 689, 832 (all from Dr. John Garvey), 127 (in case of malignancy), 253, 420, 453, 832

In addition, sweep from 420 to 482 for at least 30 minutes

End of Tumors, Benign section.

machines. The frequencies below [out of a much longer list of over 800 frequencies, covering all strains] are the most important. This program contains all strains detected as of April 27, 2021.” All the times (in parentheses) are in seconds. All numbers following the times are for the same amount of seconds until there’s a change:

(180) 38747.296, (60) 38752.480, (120) 38774.527,
 (60) 38792.701, 38794.000, 38795.299, 38796.598,
 38806.993, 38817.394, (180) 38829.102,
 (60) 38857.750, 38860.357, (180) 38861.660,
 (60) 38862.964, 38864.267, 38865.571,
 38872.091, 38873.395, 38874.699, 38876.003,
 38877.308, 38878.612, 38881.222, 38882.526,
 38883.831, 38885.136, (180) 38904.721,
 (60) 38906.027, (120) 39398.157

Coxsackie Viruses (unspecified)

These viruses, along with polioviruses, echoviruses and others, belong to the group enteroviruses. Named for their presumed site of origin, the village of Coxsackie in New York, US, this group has a wide variety of symptoms. From Dr. John Garvey: 136, 232, 422, 424, 435, 921, 923
 Also try: 144, 380, 595, 612, 642, 674, 676, 708, 769, 889, 922, 1044, 1083, 1189, 1416, 1422, 1488, 1500, 1850, 2166, 2378, 2632, 2832, 3636, 4125, 4130, 4331, 4357, 4755, 5663, 5921, 5987, 6381, 8255, 8265, 8633, 8719, 9511, 9513

Coxsackie A

Common symptoms are respiratory disturbances, fever, liver disease, skin eruptions, neurological disorders, *Herpes* sores in the throat, and unexpected infant deaths. See below. Also try other entries.

Coxsackievirus A16 / Hand, Foot and Mouth Disease

Caused by Enterovirus family microbes, especially Coxsackievirus A16. Most often afflicts children. Symptoms include fever, sore throat, poor appetite, mouth sores, and a rash or blisters on the palms, soles and buttocks. Virus spreads via feces, mucus, saliva, and fluid from the blisters. Untreated, it will last a week to ten days. The biggest danger is dehydration. Don’t mistake this virus’s symptoms for *Shigella* or *Strep* (both bacteria).

From Dr. Richard Loyd: 889

Coxsackie B

This group may cause throat sores, fever, diarrhea, pneumonia, inflammation of the testicles, central nervous system disability, rash, inflammation of the heart muscle, and brain, liver and adrenal infection.

Coxsackie B 1

834 (from Dr. John Garvey), 353, 384, 587, 723
 From Dr. Hulda Clark: 902.27, 18122.49

Lisbon court rules only 0.9% of “verified cases” died of COVID, numbering 152, not [the] 17,000 claimed

Following a citizen’s petition, a Lisbon court was forced to provide verified Covid-19 mortality data . . . According to the ruling, the number of verified Covid-19 deaths from January 2020 to April 2021 is only 152, not about 17,000 as claimed by government ministries.

—www.americasfrontlinedoctors.org, June 23, 2021

Coxsackie B 2

534, 705 (both from Dr. John Garvey), 867

Coxsackie B 3

487, 653, 654, 868

Coxsackie B 4

Often linked to diabetes, especially Type 1.
 421 (from Dr. John Garvey) 353, 540, 8632
 From Dr. Hulda Clark: 898.55, 18047.81

Coxsackie B 5

From Dr. Garvey: 462, 1043, 1083
 Also try: 569, 647, 708, 774

Coxsackie B 6

From Dr. John Garvey: 736, 814
 Also try: 343, 488, 551, 657, 668, 669

Cytomegalovirus (CMV) / Salivary Gland Virus

See “*Herpes* Virus Type 5 (Human *Herpes* Type 5) / *Cytomegalovirus* (CMV) / Salivary Gland Virus” under *Herpes*, all types, this section.

Dengue Virus, Types 1, 2 and 3 / Dengue Fever / Breakbone Fever

Sudden fever lasts about one week. Symptoms include severe headache, cold clammy skin, weak rapid pulse, and gastrointestinal distress (abdominal pain, diarrhea, nausea and vomiting). Tiny red-purple spots from broken blood vessels appear on lower limbs, chest or entire body. Muscle, joint and head pain can be so severe that Dengue is sometimes called “breakbone fever” or “bone-crusher disease.” Blood platelets, which help with clotting, are usually below normal levels until the fever subsides; so subject may bruise and bleed from mucous membranes and gums. In severe cases, blood vessels may burst in the brain (sensitive to bleeding and damage), leading to death. Children and weak adults are susceptible to dying.

Dengue, transmitted by mosquitoes, has been reported for over 300 years in Asia, Africa and North America. Today it’s most common in Africa, Middle East, Southeast Asia, Brazil, and other tropical locales. Highly infectious in blood or while the subject is still feverish, the virus can be contained by better sanitation and by eliminating open areas of stagnant water where mosquitoes breed.

Natural Substances That Kill Viruses and/or Support Immune Function

- ◆ **Colloidal Silver.** Liquid made through the process of electrolysis. Contains both silver colloids (minute particles) and silver ions (tinier particles, which carry an electrical charge). Disables any single-celled pathogen it touches (see Chapter 3).
- ◆ **Colostrum & Transfer Factors.** Produced by a nursing mammal (or human) just after birth (and before the milk flows). Contains transfer factors that support, strengthen and modulate the body's many immune cells. Both colostrum and transfer factors are sold as supplements.
- ◆ **Echinacea.** Increases the number and mobility of white blood cells, which scavenge pathogens. Taken as a tincture, it must make the mouth tingle or else it's not active. Activates the white blood cells up to three days after you stop taking it.
- ◆ **Elderberry (*sambucus nigra*).** A bush plant. Black elderberry and sometimes blue elderberry have been used for healing for centuries. An antioxidant, elderberry prevents viruses from entering the cell and replicating.
- ◆ **Essential Oils (EOs).** Eucalyptus. Cinnamon bark. Clove bud. Lavender. Lemon. Oregano. Tea Tree. Thyme. Combined, they kill a variety of bacteria, viruses and biofilms. Put in a carrier oil (avocado, jojoba, coconut, sesame, olive), they can be rubbed onto the skin. One or two drops can be poured into an ounce of colloidal silver and inhaled through a medical nebulizer to help the lungs.
- ◆ **Iodine.** Mineral. An essential nutrient and potent natural germicide, used by every tissue of the body. Most people are highly deficient. When taken (under medical supervision) in therapeutic amounts, the iodine floods the body—knocking off toxic bromide and fluoride that had latched on to the iodine cell receptor sites and displaced the iodine. Some people believe they have an iodine allergy, but they are reacting to the toxins that have been released into the bloodstream.
- ◆ **Ozone Therapy.** A gas, safe and effective when used correctly. Kills pathogens while vitalizing healthy tissue. You need special equipment to produce the ozone. An ozone sauna allows the ozone to reach the bloodstream rapidly. Ozone is an oxidant—don't use it at the same time as Vitamin C and other antioxidants (see Chapter 3).
- ◆ **Zinc.** Mineral, vital for immune cell function. A major defense against viruses and other pathogens.
- ◆ **Quercetin / Dihydroquercetin.** A flavonoid found in foods. Repairs blood vessels. Makes Vitamin C last longer by replacing its spent electrons. Most important, it escorts zinc across cell membranes. (It's a safer, natural alternative to the drug hydroxychloroquine, which the FDA has discredited.)
- ◆ **Vitamin D3.** Hormone made by the skin during sun exposure. Also in fatty animal foods. Builds bone and immunity. Deficiency is a primary risk factor in severe Covid-19 infection and death.⁶² Most people are deficient. Test levels every few months to avoid overdosing. Take with magnesium and Vitamin K₂.
- ◆ **Sodium chlorite (also called MMS).** Oxidant, similar to ozone. Sold as an inexpensive supplement. When used as directed, MMS treats any condition involving pathogens (such as Covid) or toxins (such as autism). Don't confuse this with toxic chlorine; the two are very different. See MMS, page 618.
- ◆ **Glutathione & N-acetyl-cysteine (NAC).** Glutathione detoxifies. Keeps white blood cells viable longer. Glutathione deficiency is associated with Covid severity.⁶³ NAC, a precursor to glutathione, counteracts blood clots and reduces replication of influenza viruses.⁶⁴ NAC also modulates inflammation. Available as supplements.
- ◆ **Melatonin.** Hormone produced by pineal gland. Regulates sleep, quells inflammation, enhances Vitamin D signaling, helps build immune cells, recharges glutathione. Take at night. Available as a supplement.
- ◆ **Vitamin C.** Antioxidant. Major defense against all pathogens. Protects cell membranes from invading microbes and also strengthens blood vessels. Take 1 gm every hour or to bowel tolerance.
- ◆ **Star Anise.** Spice. Contains shikimic acid, which prevents spike proteins in Covid and its "vaccines" from attaching to cell receptor sites and spreading. Grind it in a spice grinder and drink it as a tea.
- ◆ **Pine Needle Tea.** Certain safe species (Eastern white, pinyon, Masson pine) are antibacterial, antiviral and antifungal. Prevent platelet clumping. Combats spike proteins (see Star Anise, above).
- ◆ **Fennel Seeds.** Herb. Similar antiviral (and anti-Covid) properties (see Star Anise, above).
- ◆ **Dandelion leaf.** Herb. Similar antiviral properties (see Star Anise, above). Available as a tincture.



Slowly an apprehension of the intimate, usable power of God is growing among us, and a growing recognition of the only worthwhile application of that power—in the improvement of the world.

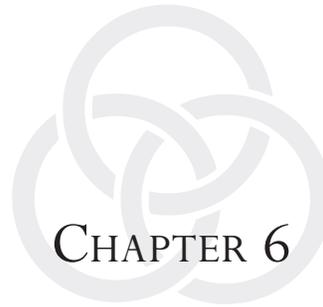
—CHARLOTTE PERKINS GILMAN,
AMERICAN WRITER, POET, LECTURER, SOCIAL CRITIC AND ACTIVIST (1860–1935)



Chapter 6 Outline **Creating a Better World, Inside and Out**

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Creating a Better World, Inside and Out

INTRODUCTION

Rife technology is about life and overcoming illness. But any genuine discussion of healing must also address the reality of death. After all the clinical trials are published, data is analyzed, anecdotal reports are offered and advice is given, some deaths are inevitable. Despite your or my best efforts, within our circle of family, friends, lovers, acquaintances and colleagues, someone will not wake up to see the sun rise tomorrow.

Most people view death as the cessation of life in the physical body. But death can express itself in different ways, even among the living. Take emotional numbness. The living can also experience a sort of death: the death of emotional expression. Sometimes, to protect ourselves from feeling too much pain, we barricade ourselves against any and all emotions, pleasurable or not. Yet hiding diminishes us. When we hide who we truly are, we cannot connect with ourselves or with others. Perhaps this is the worst kind of death. But in hiding, we disconnect—not only from others, but from ourselves.

Feelings of connection helps us feel secure. Beginning with family, they extend to community and country. Being connected is essential to our health and sense of well-being. In fact, a sense of belonging is fundamental to our very identity. It's threaded through the cellular memory of our bodies—from the cytoplasmic matrix that joins together all of our cells, to the tiny particles that flash, in an elaborate orchestrated dance, within our atoms.

The interconnecting functions in all living systems point to the need for holistic therapies. Holistic therapies heal by helping to reestablish the functional relationships between all the aspects of a system. Thus, healing at its deepest level may be described as the awakening, affirming, and energizing of connections that have been submerged or lost. In many ways, the process of healing is the process of becoming more aware.

Awareness can manifest in many ways: physical, emotional, mental, energetic. It also happens in stages. Usually, we're more aware of the overtly physical changes that occur in us than the emotional, or the even more subtle energetic changes.

One of the most powerful waves of recent awakening, health-wise, came with the birth of the self-help movement in the 1960s. People were not simply interested in getting an education, a good job, and having a home and family. They wanted to explore their deeper desires and dreams. Sometimes this knowledge of self came at a price. It meant separating from people whose paths were different from their own. But still, more and more people were willing to depart from what was expected of them, finding new meaning in the discovery of their inner lives.

Revelations in the personal sphere led to an understanding of the bigger picture. There was a slogan in the early 1970s from the second wave of the women's liberation movement: "The personal is political." What feminists were referring to were the invisible social and political forces that shape our lives. The less obvious these

forces were, the harder it was to see that our problems were not unique to us as individuals. Politically awakening people became aware of how laws and social customs too often dictated how they related to themselves and to others. What previously had seemed like personal shortcomings were now being recognized as constraints imposed by globally orchestrated forces to keep the world's citizens ignorant, alienated, and powerless—the precise characteristics that allowed people to be easily controlled by outside forces.

Instead of succumbing to despair and lethargy, however, many people started to realize that they could gain strength from being kind to and connecting with others, even those radically different from themselves. The understanding and soul-searching that had been catalyzed by the self-help movement was now beginning to include a larger sphere outside of the self, as people all over the world united to dismantle the global plague of greed and fear and replace it with compassion and trust.

Despite some beneficial changes created by this global political consciousness, people were still hungry for a sense of oneness with something larger than themselves. When I was working as a singer-songwriter and later as a body-mind psychotherapist, in my conversations with others the theme that kept repeating was a longing for this bond. The connection that my audiences, clients, and friends told me they wanted seemed to be of cosmic proportions. People were starting to recognize what most ancient traditions had affirmed for centuries: *The divine without is the same as the divine within*. Another name for this all-encompassing connectedness is *spirituality*.

Spirituality is not always the same as religion, although the two can overlap. Religion is a cultural system of designated behaviors and practices, imbued and indoctrinated through formal instruction that's not meant to be questioned. It promotes codes of behavior based on written or unwritten rules, overseen by an institution or its representative. Religion is always structured so that its adherents rely on an intermediary from the governing body to impart a sense of connection to something beyond themselves. Spirituality, on the other hand, is not mediated by another person or institution. Originating from within, its expression does not depend on formal teachings. One can find inspiration from many sources—which may or may not include religious principles—but the codes of behavior for dealing with others spring from one's own conscience and sense of values, rather than from prescribed doctrine or any other external source. In either system, when a deep connection is felt, great healing can occur.

A patient grants you the gift of trusting you with their lives, and there is no room for mistakes.

—Alberto Quinoñes-Hinojosa, MD, neurosurgeon, quoted in *The New York Times* May 13, 2008

This chapter was written to explore the possibilities of multi-dimensional healing, under circumstances ranging from the mundane to the extraordinary. You might view the three chapter sections—**The Personal**, **The Political**, and **The Transcendent** (sometimes known as *transpersonal*)—as the evolution of one human being (me). However, this is also a progression that I have often seen occur with other individuals and large groups.

The Personal is designed to help those who are dying to manage their fear of death, and to help the survivors face any fears of being left behind and to gracefully maneuver through the grieving process. **The Political** addresses the issues that continue to affect us on a global level after we have moved through the rawest, most

painful stages of our mourning and dried our tears. **The Transcendent** discusses the quantum nature of consciousness that in some ways is even more “real” than the personal and political realms. Once we open to the boundless energetic universe in which we live, two changes can occur. We more easily navigate the difficult social and political forces that impact our lives. And we can heal in profoundly transformative ways.

THE PERSONAL

The Trauma of Illness and Death

When I mention Rife Therapy to seriously ill people, they always want to know: “Do the frequencies *really* work? What's the success rate for the terminally ill?” Of course what they're really asking is, “What are *my* chances? Can you guarantee that *I* [or a loved one] will be cured?” While I feel compassion for them, I can only reply, “I don't know what your chances are. There are no guarantees of anything.” The refreshing success rate for electromedicine in general and Rife Therapy in particular—compared to a less than 3% success rate for chemo and radiation—does not guarantee that *their* life will be saved. Besides, all the data in the world does not address our emotional needs. To most people, death is an unknown quantity. And the unknown can be very scary.

The relatives and friends of the seriously ill are afraid, too. They ask me the same questions, demand the same guarantees. They want to bypass their grief (or guilt) if a loved one dies. They're reminded of their own mortality as they grapple with the inevitability of their loved one leaving them. And they want to be spared the trauma of

grief if, after allowing themselves to hope that rifting will work, their loved one dies and they end up having to face loss anyway. It can feel like a bigger loss to have their hopes kindled and then extinguished, than if they had not even dared to hope at all. Not surprisingly, the people who try to protect themselves from disappointment are sometimes the most vocal critics of Rife Therapy. Afraid of being deceived and disillusioned, they end up dismissing it yet at the same time refuse to investigate its potential.

Most people in technologically advanced cultures are taught that death is separate from life, to be despised and feared. There are few role models for how to cope with (or tell someone about) a loved one's imminent or recent passing. Most of us don't learn how to fully give in to the grieving process during this time. We feel pressured to be upbeat and smiling, even though grieving can take years. People mourning a fresh loss usually don't have the energy to engage with the outside world. Yet too often, they try to push themselves into activity before they're ready. In fact, they go out of their way to hide their pain and sadness because they're afraid of being impolite or a burden to others. The best thing mourners can do is be gentle with themselves, and not force themselves to feel or behave in any particular way. (See Sidebar, "How People Die.")

"Shattering Eight Myths About Grief" from the Hospice Foundation of America may give you some solace when it's your turn to mourn.

Myth 1: We only grieve deaths.

Reality: We grieve all losses.

Myth 2: Only family members grieve.

Reality: All who are attached grieve.

Myth 3: Grief is an emotional reaction.

Reality: Grief is manifested in many ways.

Myth 4: Individuals should leave grieving at home.

Reality: We cannot control where we grieve.

Myth 5: We slowly and predictably recover from grief.

Reality: Grief is an uneven process, a roller coaster with no timeline.

Myth 6: Grieving means letting go of the person who has died.

Reality: We never fully detach.

Myth 7: Grief finally ends.

Reality: Over time, most people learn to live with loss.

Myth 8: Grievers are best left alone.

Reality: Grievers need opportunities to share their memories and grief, and to receive support.¹

Some bereavement counselors teach that the ideal goal is to eventually detach enough not to grieve. Although this approach does have some merit, it's important not to confuse detachment with stifling or denying the pain. The previous guidelines are still useful to help us express our grief, so we can more quickly process our pain and be at peace with loss.

What To Say and What Not To Say to Someone Who's Grieving

People who are in a position to offer support and comfort to mourners often don't know how to reach out, even though they want to. They might try to distract the mourner from strong emotions—either because they think this is the best way to handle death, or they're uncomfortable with emotional intensity and don't want to get triggered themselves. Or, they don't want to think about their own impending death or the deaths of their own loved ones.

Some people offer remarks that are meant to comfort, but which don't help the person who's grieving. In fact, the remarks are well-meaning platitudes that usually make the mourner feel worse. The mourner, not wanting to hurt the feelings of the person who's trying to comfort—or afraid to destroy a potential source of comfort—is too polite, grief-stricken, or dispirited to object.

How People Die

Allopathic medicine alienates—not only due to its medical protocols, but also its treatment of those who are dying. The authors of "Death by Medicine" write that senior citizens "have accepted the overriding assumption from allopathic medicine that aging and dying in America must be accompanied by drugs in nursing homes and eventual hospitalization with tubes coming out of every orifice."² However, according to a nationwide poll, almost 90% of Americans would prefer to be cared for (and die) in their homes if faced with a terminal illness. In the past few decades, the hospice movement has stepped in to fill this vital need.

Hospice care is focused on pain and symptom management. Many hospice environments are set up in the subject's home, with nurses and other personnel assisting family members in the physical care of the dying person. Although hospice can be a physical place, it began as a concept: to care for the dying in ways that maintain their dignity and help them focus on quality of life. This involves providing emotional and physical support to the dying without trying to artificially prolong life or hasten its end. Bereavement support for the person's family before and after death is also provided.

We must fight the battle that is before us: human beings versus monstrous corporations and their body-snatched government puppets. . . .

There are two kinds of politics in the world: the politics of love and the politics of fear. Love is about cooperation, sharing and inclusion. It is about the elevation of each individual to a life neither suppressed nor exploited, but instead nourished to rise to its full potential—a life for its own sake and so that we may all benefit by the gift of that life. Fear and the politics of fear is about narrow ideologies that separate us, militarize us, imprison us, exploit us, control us, overcharge us, demean us, bury us alive in debt and anxiety and then bury us dead in cancers and wars. The politics of love and the politics of fear are now pitted against each other in a naked struggle that will define not only the 21st century but centuries to come. We are the Sons and Daughters of Liberty in that struggle, indeed we are. Let us not shirk from the mission that fate has bestowed upon us, for it has done so as a blessing.

—Doris “Granny D” Haddock
(1910–2101)

She walked across the United States in 1998 to protest the corporate takeover of the world. The above is excerpted from an August 16, 2003 speech given in Hood River, Oregon, US.

In poor countries, corporations are setting up expensive equipment to redirect, repackage and distribute water, after which they charge the peasants for using what was once simply collected or bought for a very nominal fee. During the last two decades this happened in Bolivia, one of the poorest countries in South America. In exchange for a multi-million dollar loan, Bolivia’s corrupt government allowed a private company to take charge of water “services.” However, this private water company charged the Bolivian people 35% to 300% more than what they had been paying, so water cost more than food. For some people, water bills comprised half their monthly earnings. When a movement of farmers, workers, peasants and others responded with a general strike, the government—after declaring martial law and killing civilians—revoked its water privatization legislation. However, the water privatization company then sued the Bolivian government for \$40 million due to “breach of contract,” claiming that investors’ rights take precedence over the rights of the people who live in that country.

In Canada, the province of British Columbia has a law forbidding exports of its water. A California-based company called Sun Belt, claiming that this lack of access would force it to lose a \$10 million profit, sued

the government of Canada, citing a violation of its NAFTA-based investor rights. The status of the case is unclear, as NAFTA proceedings are open to neither the public nor journalists.

- ◆ Similar to the situation with water, laws established by nations to protect the environment can be overturned by corporations, on the premise that these environmental laws are an impediment to free trade.
- ◆ Also similar to the situation with water, laws created by nations to protect the labor force (to ensure realistic wages and fair treatment of the workers) can be challenged by corporations, on the premise that these laws are an impediment to free trade.
- ◆ Corporations, not individual nations, decide when and where to erect offices, factories, pipelines, and dams. They also decide the circumstances under which they conduct business. If the government of a country wants to exercise its right as a *sovereign nation*—that is, determine its own destiny—the corporation, backed by international law, can sue the country for preventing (the unlimited expansion of) commerce.
- ◆ Under international “globalization” laws, any country’s effort to protect its people, food, and natural resources is considered an “impediment to free trade” and is therefore a crime. “No one should be above the law,” writes David Morris. “Yet one entity is granted a *de facto* exemption from [this principle] . . . the corporation. It is an odd exception. After all, corporations can wield power and wreak damage a million times greater than can an individual.”³³

Depraved acts are occurring daily all over the world. Whether you identify as a capitalist, conservative, liberal or socialist, or consider yourself the most apolitical person around: unless you belong to the power elite, access to your choice of nutritional supplements and other related products is being restricted. Access to the health care you want and deserve is also being threatened until it’s permanently legislated out of existence. Furthermore, people are being forced to submit to medical interventions that they *don’t* want, such as mandatory vaccinations, establishment medicine cancer protocols, and forced sterilizations. The “alternative” press increasingly reports that people are being prosecuted as criminals for choosing non-mainstream therapies. Children who receive holistic treatments (even if it’s their own choice) are being removed from their homes and put into foster care. Health care providers are being prosecuted as criminals for offering the therapies. Often they are fined and their licenses are revoked. In many cases, they are even being sent to prison.

Dominator Paradigm Propaganda

Public Relations Strategies

In 2001, a groundbreaking book was published called *Trust Us, We're Experts: How Industry Manipulates Science and Gambles With Your Future*. The authors explained that much of what people believe is factual (or “common knowledge”) is actually bias.

When you hire a contractor or an attorney, they work for you because you are the one who pays for their services. The PR [public relations] experts who work behind the scenes and the visible experts who appear on the public stage to “educate” you about various issues are not working for you. They answer to a client whose interests and values may even run contrary to your own. Experts don’t appear out of nowhere. They work for someone, and if they are trying to influence the outcome of issues that affect you, then you deserve to know who is paying their bills.³⁴

Chiropractor Tim O’Shea discusses some of the ploys used by public relations (“PR”) firms to create acceptance by the public.

When PR firms attack legitimate environmental groups and alternative medicine people, they . . . use special words which will carry an emotional punch: “outraged,” “sound science,” “junk science,” “sensible,” “scaremongering,” “responsible,” “phobia,” “hoax,” “alarmist,” “hysteria.” . . . As the science of mass control evolved, PR firms developed further guidelines for effective copy. Here are some of the gems:

- ◆ Dehumanize the attacked party by labeling and name calling.
- ◆ Speak in glittering generalities using emotionally positive words.
- ◆ When covering something up, don’t use plain English; stall for time; distract.
- ◆ Get endorsements from celebrities, churches, sports figures, street people—anyone who has no expertise in the subject at hand.
- ◆ [Use] the “plain folks” ruse: us billionaires are just like you.
- ◆ When minimizing outrage, don’t say anything memorable . . . point out the benefits of what just happened . . . [and] avoid moral issues.³⁵

“Front” groups, common in industrial circles, are organizations whose names disguise the real purpose

Who’s Doing the Financing?

The Coca-Cola Company, which makes soda pop, has a history of “sponsoring” (giving money to) the following governmental organizations, foundations, and medical schools. This is only a small sample of recipients. Also, be aware that Pepsi and other companies make similar contributions.

- ◆ **Governmental Agencies:** Centers for Disease Control; Health and Human Services; National Heart, Lung, and Blood Institute; National Institute of Child Health and Human Development; National Institutes of Health.
- ◆ **Medical Schools:** Emory University, Harvard Medical School, Medical University of South Carolina, University of Georgia Department of Foods and Nutrition, University of Washington Center for Public Health Nutrition.
- ◆ **Public Health Organizations and Foundations:** Academy of Nutrition and Dietetics, American Academy of Pediatrics, American Diabetes Association, American Cancer Society, American College of Cardiology, American College of Sports Medicine, American Heart Association, American Lung Association, American Medical Association, American Red Cross, Center for Food Integrity, International Life Sciences Institute North America, National Dental Association, National Black Nurses Association, National Hispanic Medical Association, and (incredibly!) The Obesity Society.

—data from Daniel G. Aaron and Michael B. Siegel,
“Sponsorship of National Health Organizations
by Two Major Soda Companies,”

American Journal of Preventive Medicine, January 2017

of the groups. In fact, common-use terms have been incorporated into the names of organizations that are doing the very *opposite* of what the terms mean. This practice of *reversals* is a standard strategy of the dominator class, as depicted in the chart on the following page. Other names whose commonsense meanings belie the true purposes of the groups are Advancement of Sound Science Coalition, Air Hygiene Foundation, Alliance for Better Foods, American Council on Science and Health, Center for Produce Quality, Consumer Alert, Industrial Health Federation, International Food Information Council, and Manhattan Institute.

One more thing. It’s always useful to know who is financing an organization—whether the organization is part of government, a nonprofit, a charity, or an institution such as a university. See Sidebar, “Who’s Doing the Financing?,” which provides a brief but representative overview.

produced squares, not the usual six-sided structure into which water crystals usually form. “Hit music does not always contribute to the production of well-formed crystals,” Emoto observed. He then described his personal reaction to the water shapes produced by heavy metal music. Heavy metal (an interesting name)—which is more like random noise than music—has correspondingly disharmonious waveforms compared to most other types of music, which have harmonious waveforms. (See Appendix C, “Healing with Electromedicine and Sound Therapies,” for more information.) Not surprisingly, the water crystals from heavy metal music were artistically less beautiful. “This music,” Emoto explained, “is filled with anger and seems to be denouncing the world. Subsequently, this crystal’s basic well-formed hexagonal structure has broken into perfect pieces. The water seems to have reacted negatively to this music. We are not saying that heavy metal music is bad, only that there must have been a problem with the lyrics.”⁶⁵ These results are consistent with other experiments in which cows exposed to classical music behave in a tranquil manner and produce ample milk, whereas cows exposed to synthesized, heavy metal music clearly become agitated and produce less milk.

The last of Emoto’s experiments that I will describe involve words alone, without music. Words have impact because there is *emotion* and *intent* behind the words. “What kind of reaction does water show to words or to the sounds that words make?” Emoto asked. Even the tone of voice can make a difference. “For instance, there is a great difference between angrily yelling ‘You fool!’ and saying ‘You are a fool’ in a gentle way.”⁶⁶ Onto bottles of distilled water, Emoto and his colleagues taped pieces of paper containing various words and phrases. To maintain consistency, the messages were typed by a word processor rather than handwritten. The studies were done more than once, and the results were consistent each time. You probably can guess what happened. “Thank you,” “I love you,” “Love/Appreciation,” “Soul,” “Angel,” and “Beautiful” all produced lovely crystals that were pleasing to the eye. “You fool” (said angrily), “You make me sick; I will kill you,” “Demon,” “Devil,” and “Dirty” produced chaotic, truly ugly shapes. Significantly, “Do it” produced a hollow round interior with irregular edges, while “Let’s do it”—suggesting cooperation and connection rather than domination and hierarchy—produced a crystalline shape.

What many people don’t realize is how dynamic the structure of DNA is. The base pairs are always moving and vibrating, electrons are migrating, holes are opening up and closing through the center of the DNA. Nothing stays still for more than a femtosecond here or a millisecond there.

—Jacqueline K. Barton,
professor of chemistry, California
Institute of Technology
quoted in *The New York
Times*, March 2, 2004

Emoto also noted the differences between the structures depicting “Thank you” in English and Japanese. The “thank you” crystal in Japanese, he remarked, is eerily similar to that produced by Bach’s Goldberg Variations. “Goldberg Variations was composed by German-born Bach to express his gratitude,” Emoto reflects. “The word ‘Thank you’ in Japanese exists to help us express gratitude. . . . English must have derived differently.”⁶⁷

The theme is crystal clear. *What we think affects us and others profoundly*. Mr. Emoto’s experiments have enormous implications for human (and animal) healing, as our bodies consist of about two-thirds water.

Changing Our DNA

Glen Rein and Rollin McCraty were used to conducting novel experiments. But what they discovered surprised even them. Human volunteers were asked to direct specific feelings and thoughts toward living DNA samples taken from a human placenta. The DNA—whose two strands are normally interwoven—had been exposed to heat to make the strands unwind. “Individuals trained in generating focused feelings of deep love showed high coherence ratios in their ECG frequency spectra, and all were able to intentionally cause a change in the conformation of the DNA,” wrote Rein and McCraty in “Modulation of DNA by Coherent Heart Frequencies.” That “change”

in the DNA’s form consisted of nothing less than *the DNA rewinding back into its intact helical structure!* (DNA emits photons, or light. The winding and unwinding of the DNA is measured by how much ultraviolet light, at the wavelength of exactly 260 nanometers, it absorbs.) As might be expected, the subjects with the most coherent emissions had the strongest effect on the DNA, while those individuals “who showed low coherence ratios, although in a calm state of mind, were unable to change the conformation of the DNA.”⁶⁸

In another paper, “Local and Non-Local Effects of Coherent Heart Frequencies on Conformational Changes of DNA,” Rein and McCraty wrote about subjects who were located as much as one-half mile from the DNA, but were still able to rewind the two strands.

The results of this study indicate that the heart’s energy field can directly modulate these basic cell functions [such as the creation of proteins and enzymes], via a direct action on DNA. . . . This

energy transfer is distinctly different from the known electrical and chemical communication from the heart to the brain. . . . The unusual ability of heart energy to carry three different frequency patterns associated with different intentions suggest a non-electromagnetic information carrier [scalar waves]. . . . *Human intentionality produces effects which defy conventional laws of electromagnetism with respect to their independence of space and time. The long distance effects observed here support these observations and indicate that coherent heart energy may be a carrier for such non local effects.* The implications of this research suggest a novel mechanism for interpersonal, heart-felt communication between individuals which involves coherent heart energy. [emphasis added]⁶⁹

Thus we have scientific proof that positive emotions produce coherent heart energy; that coherent heart energy produces coherent brain waves and oscillations in the cells, which beneficially affect the entire system; and that individuals who emit coherent heart frequencies can literally heal on the cellular level.

In another paper, “Effect of Conscious Intention on Human DNA,” Rein explores in greater detail the effects of *specific* intentions. A healer named Leonard Laskow consecutively assumed five different states of consciousness, during which he focused on three Petri dishes containing DNA of tumor cells. “The growth of tumor cells in culture was chosen because it could be monitored quantitatively using state of the art biochemical techniques,” reports Rein, and because it was “highly relevant clinically.” Laskow described being in a state of “transpersonal unconditional love” in all five experiments, which “allowed him to be in resonance with the tumor cells.” The five different mental intentions that were “studied for their biological activity” are as follows:

- ◆ Returning to the natural order and harmony of the cell’s normal rate of growth, i.e. before they were transformed into tumor cells.
- ◆ Circulating the microcosmic orbit [presumably, this means that Laskow was merged with the cells at their atomic level].
- ◆ Letting God’s will flow through his hands, i.e. a transpersonal intention.
- ◆ Unconditional love, i.e. no specific direction to the energy was given.
- ◆ Dematerialization into the light and/or dematerialization into the void.⁷⁰

I sometimes ask people, “Can you be aware of your own presence? Not the thoughts that you’re having, not the emotions that you’re having, but the very presence of your very being?”

You become aware of your own presence by sensing the entire energy field in your body that is alive. And that is the totality of your presence.

—Eckhart Tolle (born 1948),
author of spiritually-oriented books,
including *The Power of Now* and *A New Earth*

Together, Rein and Laskow discovered that a *combination of heart-centered energy (love) and mind-centered energy (focused mental attention) produced the greatest results.* For instance, allowing God’s will to flow through his hands had only half the effectiveness as intending the cells to return to their natural order, the normal rate of growth. Generalized, unconditional love did not stop the growth of the tumor cells. Interestingly, when Laskow was in the “microcosmic orbit” state of consciousness, he could will the cells to either decrease or increase their rate of cancerous growth, by about the same percentage. Even more instructive, Rein points out, intention “produced the same 20% inhibitory effect as did imagery alone.” However,

when the image of few cells in the Petri dish was combined with the intention for the cells to return to their natural order, the inhibitory effect on cell growth was doubled to 40%. *These results therefore suggest that imagery and intent each contributed equally to inhibiting the growth of tumor cells in culture, and that their effect is additive when combined together.* [emphasis added]⁷¹

The data from Rein and his colleagues topple many of the concepts we’ve inherited from the Western medical model. Take the assumption that we’re doomed to repeat the illnesses of our ancestors. Physicians reinforce this mindset because for diagnostic purposes, they partly rely on health history questionnaires that reveal patterns in a family tree. So if, for example, your parents or grandparents had diabetes or heart problems or cancer, it’s assumed that your chances of developing those ailments increase. Now we know, however, that people can alter their presumably fixed genetic expressions with dietary changes, exercise, herbs—and focused intention. “It is well established in the molecular biology community, but unknown [to] most people,” comments Rein, “that the primary structure of DNA does actually change. We are therefore not [necessarily] stuck with the genetic blueprint passed down to us from our parents.”⁷²

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APPENDIX A

Resources

Most people live, whether physically, intellectually or morally, in a very restricted circle of their potential being. They make use of a very small portion of their possible consciousness, and of their soul's resources in general, much like a man who, out of his whole bodily organism, should get into a habit of using and moving only his little finger. Great emergencies and crises show us how much greater our vital resources are than we had supposed.

—WILLIAM JAMES, AMERICAN PHILOSOPHER,
PSYCHOLOGIST AND WRITER (1842–1910)

Unless otherwise specified, all addresses are in the United States.
Inclusion of the following products and services should not be construed as unconditional endorsement.

AIR PURIFICATION

Plant Air Purifier®
138 Maple Hill Drive
Kingston, New York 12401
phone: 855-247-9900
website: plantairpurifier.com

Based on research of NASA scientist Dr. B.C. Wolverton, the Plant Air Purifier® uses a common houseplant—along with a small, built-in electric fan in a specially equipped planter—to purify indoor air. The system includes activated carbon (to attract toxin particles from the air) and washed ceramic media (instead of soil) to hold the plant. While microorganisms naturally living on plant roots consume toxins and convert them into nutrients for the plant, the fan circulates air through the roots and into the room. This ingenious system cleans up to 100 times more air than a regular plant, and requires only water and occasional plant food.

BODY-MIND THERAPIES

Emotional Freedom Techniques (EFT™)
website: emofree.com

Whenever physical or emotional trauma occurs, our acupuncture meridians become unbalanced, which can lead to mental and physical health problems. EFT™, developed by engineer Gary Craig, is used to manage the effects of abuse, restoring the integrity of the short-circuited meridians without drugs or equipment. It alleviates or eliminates entirely: addictive cravings, anxiety, depression, fears, grief and phobias, as well as physical pain, breathing difficulties, headaches and overweight. EFT™ (also known as “tapping”) is self-administered and easily learned. It's effective for children, adults and even animals, with a clinical effectiveness of over 80%. Mr. Craig's website offers a free, downloadable EFT™ manual. Other people who learned EFT™ from Craig have created modalities that resemble EFT™, but Craig's method of teaching may yield the safest and most comprehensive results. Mr. Craig also offers an EFT™ practitioner certification course.

After the 1800s: AMA Influence

The American Medical Association (AMA) was founded in 1847 around two propositions: one, all doctors should have a “suitable education” and two, a “uniform elevated standard of requirements for the degree of MD should be adopted by all medical schools in the US.” In the days of its founding, AMA was much more open—at its conferences and in its publications—about its real goal: building a government-enforced monopoly for the purpose of dramatically increasing physician incomes. It eventually succeeded, becoming the most formidable labor union on the face of the Earth.

AMA’s initial drive to increase physician incomes was motivated by increasing competition from homeopaths (AMA allopaths use treatments—usually synthetic—that produce effects different from the diseases being treated while homeopaths use treatments—usually natural—that produce effects similar to those of the disease being treated). This competition did serious damage to the incomes of AMA allopaths. In the year before AMA’s founding, the *New York Journal of Medicine* stated that competition with homeopathy caused “a large pecuniary loss” to allopaths. In the same issue, the dean of the school of medicine at the University of Michigan railed against competition because it made treating sickness “arduous and un-remunerative.” Apart from reversing rapidly declining incomes, allopaths also wanted to rescue their public reputations, which quite reasonably suffered given their proficiency in killing patients through such crude practices as bloodletting (“exsanguination”) or mercury injections (poisoning). . . . The Massachusetts Medical Society opined in 1848 that physicians should be “looked upon by the mass of mankind with a veneration almost superstitious.”

“The curse of medical education is the excessive number of schools” [was said by] Abraham Flexner [in] 1910. To accomplish the twin goals of artificially elevated incomes and worship by patients, AMA formulated a two-pronged strategy for the labor market for physicians. First, use the coercive power of the state to limit the practices of physician competitors such as homeopaths, pharmacists, midwives, nurses, and later, chiropractors. Second, significantly restrict entrance to the profession by restricting the number of approved medical schools

in operation and thus the number of students admitted to those approved schools yearly.

AMA created its Council on Medical Education in 1904 with the goal of shutting down more than half of all medical schools in existence. . . . In six years the Council managed to close down 35 schools and its secretary N.P. Colwell engineered what came to be known as the Flexner Report of 1910. The Report was supposedly written by Abraham Flexner, the former owner of a bankrupt prep school who was neither a doctor nor a recognized authority on medical education. Years later Flexner admitted that he knew little about medicine or how to differentiate between different qualities of medical education. Regardless, state medical boards used the Report as a basis for closing 25 medical schools in three years and reducing the number of students by 50% at remaining schools.

Since AMA’s creation of the Council a century ago, the US population (75 million in 1900, 288 million in 2002) has increased in size by 284%, yet the number of medical schools has declined by 26% to 123. In terms of admissions limits, the peak year for applicants at US schools was 1996 at 47,000 applications with a limit of 16,500 accepted. This works out to roughly 64% of applications rejected. . . . AMA would likely argue that there’s nothing necessarily wrong with very high rejection rates. This is correct, except for the fact that these rates are being applied to pools of candidates who are cream-of-the-crop in quality and have put themselves through a very costly admissions process. . . .

AMA has built an impressive edifice, one that has completely insulated physicians from recessionary (“cyclical”) and until recently, technological (“structural”) unemployment. While decade in, decade out, recessions, depressions, consolidations, and (recently) outsourcing have dislocated millions of blue-collar, engineering, computer programming, and middle management employees from jobs and forced permanent career changes, physicians as a class have been almost completely immune. Unlike workers in most other industries, a competent, licensed physician with a clean record who remains unemployed despite months and months of search for work is unheard of in the US.

—Dale Steinreich, “100 Years of Medical Robbery”
Townsend Letter, October 2004

could become more interdisciplinary. However, laws circumscribe practitioners into their own tight niches.

The professionals who have the most leeway to practice in many areas, with no or minimal training, are medical doctors. This was highlighted by the case of a doctor in the state of Arizona who was, by law, allowed to perform cosmetic surgery on clients without training. Unfortunately, his lack of special training in performing surgery on the face cost several people their lives. On the other hand, most medical doctors are highly regulated as to what procedures they are allowed to offer for cancer. In the US, laws concerning cancer care are quite restrictive. Doctors can lose their licenses for treating cancer with anything other than chemo, radiation, and surgery. This leads us directly to a discussion about Rife Therapy.

Generally, in the US no health professional is allowed by a state board to use Rife Therapy for treating disease because the technology is not approved by the Food and Drug Administration. Should a doctor use it, s/he is performing a service that other doctors don't perform, and is therefore altering what the state medical board has determined is the standard of care. According to the state board, the doctor is now endangering the practice of other doctors. Because the doctor has violated the agreement with the state board that issued the license, the doctor has no protection in civil court if he or she is sued: the law has been broken, end of discussion. Thus the state board can revoke the doctor's license. And the board *will* revoke the license even if no legal action has been taken against a doctor by a client—and even if the person in fact wants, likes, has benefited from, or needs the treatment.

Remember the “hypocritical” doctor described in Chapter 6? Fear of having his license revoked may be why he received chelation therapy himself while telling his client that it was no good. This may explain why many doctors are quite secretive about their sympathy with (and participation in) modalities that are not FDA-approved. As long as state licensing boards so tightly control what health care providers can and can't do, as well as what they can and can't *say*, health professionals will be limited in their ability to help their clients.

Now you know why doctors, chiropractors, etc., don't administer rife frequency therapy. They may want to. They may in fact use it in their own homes for themselves, their families, and their pets. However, they dare not mention it to their paying clients—or even clients who aren't paying.

What about legal ramifications for the layperson? If, *for a fee*, a layperson performs a material service for someone else that makes them *feel better*—whether it's giving advice to take a relaxing hot bath to calm their nerves, selling them supplements, or even offering a glass of

water—*this may be construed as practicing medicine without a license*. Practicing medicine without a license is against the law and therefore a crime. (“Feeling better” has wide implications, but this is the law as it now exists.) Even if the layperson uses words like “support” and “restore balance,” these can still be *interpreted to mean healing of some sort*, which is practicing medicine without a license. Thus, various forms of “energy” work like chakra balancing or Rife Therapy—which are not approved for medical purposes—are legally forbidden. (Exceptions are discussed below.)

Laws that restrict the offering of services are not limited to payment. A suggested donation of any monetary amount, or even a non-cash donation such as a chicken or pair of free movie vouchers, is considered a fee. To give another scenario, in the state of Georgia, even if you don't accept payment, having a room in your home or office where people visit to receive (construed) “medical” services might cause trouble. Each state has different laws.

Someone upset by “practicing medicine without a license” might report someone. It's unlikely that the authorities would consider a chakra balancer threatening. This is because a chakra balancer is unlikely to earn enough money (or become famous enough) to threaten the livelihood of a physician. But if that chakra balancer successfully made people with “terminal” illnesses well, and was snatching business from disgruntled doctors, the authorities might be more inclined to arrest that person.

Not all laws are enforced all the time, and some laws are not enforced even most of the time. To my knowledge (using an above example), not many people have been arrested for accepting chickens in exchange for giving rife sessions. However, if the legal authorities wanted to, they *could* make arrests. One attorney told me that if all the laws on the books were enforced, over half the population would be in jail.

EXCEPTIONS

Some laws are unreasonable or impractical to enforce. For instance, some states forbid certain sexual contact between husband and wife. No one knows whether or not these laws are being broken unless a spy is in the bedroom or the couple tattles—and even then, it's doubtful that law enforcement would feel a need to prosecute. With laws that don't hurt others, when enough people routinely disobey them, they're eventually changed to reflect reality. This has happened in some states with the posted speed limit. When enough people drove 10 miles above the speed limit, the signs were changed to reflect the reality.

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back into synchronous vibration with the tendency to maintain that state of higher order.²⁹

We know that deviations from the frequencies of healthy tissue indicate energy blockages that can then lead to health problems. On the biochemical level, blockage of an area is synonymous with a static field, characterized by accumulated acids (excess hydrogen ions, or H⁺), which block the transfer of impulses the body needs for the smooth flow of information. We know that superimposing one magnetic field on another induces the flow of electrons. When the ONDAMED[®] introduces specific electromagnetic impulses into the body, the movement of electrons is induced to the organs, glands, muscles, vessels, bones, nerves, or other tissues that require a more efficient flow of information.

The ONDAMED[®] is approved by the Institutional Review Board as a non-invasive secondary therapeutic device for the alleviation of pain, discomfort, and general malaise in the treatment of various disorders. The inventor, although pleased by the reports of success, nonetheless emphasizes, “It’s very important to get the body working by itself. You don’t want to get the body dependent on a drug—or the machine, for that matter.”³⁰

ELECTROMEDICINE: PLASMA RIFE THERAPY

In 1933, the resolution power of microscopes wasn’t very high and electron microscopes were still being developed. This led American scientist Royal Raymond Rife—who wanted to examine microorganisms as small as viruses in their living state—to invent the Universal Microscope. Rife’s microscope had remarkable depth of field, and its clarity rivaled that of even later electron microscopes. The Universal Microscope held great promise in finding cures for diseases, because if you can see how living organisms respond to stimuli, you have a better chance of finding a way to destroy them.

As it turned out, the “stimuli” from Rife consisted of his next invention—the Rife Ray, an electromedical device that cured cancer and other serious diseases. Successfully used by some of the most prominent physicians of his time, the non-invasive and effective Rife Ray was driven underground, banned by the American Medical Association and FDA because it was far more effective than toxic drugs. Only in the last couple of decades has Rife’s equipment emerged again for therapeutic purposes, albeit in an altered form.

The principle of the Rife Ray’s operation was elegant. If a virus or bacterium began to oscillate in response to

a particular frequency that Rife aimed at it—and then it grew weak or destabilized—Rife knew that he had found the *resonant frequency* of the pathogen, or its *mortal oscillatory rate* (MOR). “Any object has a certain natural or resonant frequency,” explains James L. Oschman.

Strike it, bump it, pluck it, or heat it, and it will tend to vibrate at a specific frequency. This applies to a bone, a piece of wood, a molecule, an electron, or a musical instrument. . . . In the living body, each electron, atom, chemical bond, molecule, cell, tissue, organ (and the body as a whole) has its own vibratory character. . . . In terms of vibrations, the human body can be compared to a symphony orchestra. Each molecule corresponds to a particular instrument. Each bend, rotation, or stretch of a chemical bond has a certain resonant frequency, and will give off certain “notes” if it is energized. Since molecules, water, and dissolved ions are constantly bumping into each other at body temperature, all parts are constantly jiggling and absorbing and emitting energy. . . . When two objects have similar natural frequencies, they can interact without touching; their vibrations can become coupled or entrained. For electromagnetic interactions between molecules, the word “resonance” is used more often than entrainment. In the older literature you will find the term “sympathetic vibrations.”³¹

The destruction of a pathogen has often been compared to the cliché of a soprano singing a pure, focused tone that shatters a glass whose resonant frequency matches that particular tone. While this glass-shattering phenomenon is genuine, using sound to describe how Rife’s equipment worked is an imprecise analogy. A sound wave is a mechanical motion. But Rife’s units could affect microorganisms through many inches of concrete, which can absorb mechanical motion (and thus prevent it from being transferred elsewhere). Therefore, something else was responsible for the destruction of pathogens: *electroporation*, the abnormal permeability of either a microbial cell wall or a human or animal cell membrane. The permeability is most pronounced during an energy transfer, or *when there’s a match in wavelength* (frequency). The Rife Ray—through *resonance*, or the matching of wavelengths—transferred energy to the microbial cell walls. This increase in energy disturbed the electrical charge of the pathogens, causing a *change in shape and pattern*, which compromised their structural integrity. Due to this electroporation, the pathogens began to destabilize.

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1970s to early 1980s, was from Russia. Later, as more papers were published, various medical organizations and government agencies all over the world (including the National Aeronautics and Space Administration in the United States) began using this modality as well.

Both lasers and LEDs can be made to produce any color wavelength. The color—whether it's red, green, blue, or another hue—is not due to glass, paint, or pigment. It's solely the wavelength of the light itself that gives the beam its characteristic color. The wavelength is always a single-color frequency, known as *monochromatic*. Although some types of lasers include mechanisms that emit heat in the form of invisible infrared radiation, for this discussion we are interested in lasers and LEDs that utilize monochromatic visible light only, and in the *red* spectrum. Monochromatic light treatment is commonly known as phototherapy. Used properly, red wavelengths may be the most versatile of all the colors.

Lasers and LEDs differ in some important ways, but they also share similarities. Both technologies are based on the energetic behavior of electrons. Normally, electrons occupy a fixed place in one or more orbital rings that sequentially surround the atom's nucleus. When they become excited, electrons move faster and jump to higher orbits. When they relax and return to their original position, electrons release energy in the form of photons (light units). The wavelength of a photon—its color—is determined by the amount of energy released when the electron drops to a lower orbit. *It is this emitted light that is harnessed in visible light laser and LED technology.*

Lasers and LEDs occupy a certain range of frequencies (frequency band) in the EM spectrum, but the frequency being used is almost always identified by the length of the wave rather than the frequency (designated in hertz). In the band of visible light, wavelengths are measured in nanometers, abbreviated nm. One nanometer, the length of one complete wave, is one billionth of a meter and roughly about the size of a human cell.

Lasers and LEDs that emit a red color range from about 620 nm to 670 nm or 700 nm, depending on what source you consult. Some clinicians prefer a 660-nm wavelength, asserting that this length wave is easiest for the tissues to absorb. Others prefer a ruby red 630-nm or 635-nm wave, based on research published in the *Journal of Clinical Laser Medicine & Surgery* stating that a 630-nm wavelength appears “to be most commonly associated with bacterial inhibition. The findings of this study might be useful as a basis for selecting LLLT [low level laser therapy] for infected wounds.”³⁴ In this case, “bacterial inhibition” consists of the retardation of the growth and functioning of pathogens. “What is good for the body is usually bad

Brief Guide to LED Colors and Their Effects

- ◆ **Red (620–700 nm).** Energizes. Renews all cells including skin. Reduces pain and inflammation. Grows hair. Improves circulation. Kills pathogens (at 630–635 nm).
- ◆ **Orange (595–620 nm).** Energizes. Heals and normalizes skin. Normalizes emotions and focus.
- ◆ **Yellow (575–595 nm).** Energizes. Restores nerves, especially motor nerves near skin. Reduces swelling. Repairs digestion. Improves concentration and mood.
- ◆ **Green (490–575 nm).** Energizes. Reduces inflammation. Improves collagen. Decreases wrinkles and acne. Renews cells. Decreases stress and difficult emotions.
- ◆ **Blue (455–490 nm).** Kills bacteria and fungi. Tightens and normalizes skin. Decreases pain and inflammation. Lessens headaches. Soothes.
- ◆ **Violet (390–455 nm).** Heals skin conditions of all kinds, including wrinkles. Energizes mental faculties.
- ◆ **White (390–700 nm: contains all the other colors).** In other words, sunlight! Energizes. Increases collagen. Improves focus, alertness, motivation, and cognition. Decreases pain and inflammation.

Nanometers are approximate; colors blend together.

for pathogens,” remarks Gerry Graham, a US chiropractor who administers laser therapy. “For example, the right pH for the body is the wrong pH for pathogens. Similarly, 635 nm is the worst wavelength for most pathogens but is beneficial for human tissue.”³⁵

Regardless of the specific favored wavelength, researchers and practitioners who use red light find that it works on the principle of *biomodulation*—turning a cell's function on or off through physiological means. Monochromatic red light stimulates blood circulation, increases lymphatic drainage, and promotes cell metabolism by stimulating photoreceptors in the mitochondria living within the cell. (Mitochondria are tiny living organelles with their own DNA and reproduction cycles, which live in symbiotic harmony with the cell, and control many important cellular processes including energy production.) Except on the eyes in the case of a laser (explained in a moment), the light can be applied to every part of the body: skin, soft tissue, muscle, bone, brain, organs, lymphatic fluid, glands, and blood. Used over an artery, the light can improve the condition of immune cells—leukocytes, T-cells, and B-cells within the bloodstream—so they can more efficiently disable pathogens.

- 34 E.L. Nussbaum et al., "Effects of 630-, 660-, 810-, and 905-nm laser irradiation delivering radiant exposure of 1-50 J/cm² on three species of bacteria in vitro." *Journal of Clinical Laser Medicine & Surgery*, 2002 Dec;20(6):325–33 [Abstract].
- 35 Gerry Graham, personal interview, August 7, 2006.
- 36 Anna Cocilovo and Ron Rosen. "New Developments in Color Therapy: Acupuncture Meridians Facilitate the Body's Absorption of Light." *Explore*, Volume 9, Number 2, 1999, explorepub.com/articles/light_therapy.html (August 1, 2006).
- 37 Kerry G. Tume and Sean Tume. *A Practitioner's Guide to Laser Therapy and Musculo-Skeletal Injuries*, 1994. [Southern Pain Control Centre, 24 Fremantle Road, Port Noarlunga South, South Australia, 5165]
- 38 Gerry Graham, phone interview, August 7, 2006.
- 39 Gerry Graham, phone interview, August 7, 2006.
- 40 Anna Cocilovo and Ron Rosen. "New Developments in Color Therapy: Acupuncture Meridians Facilitate the Body's Absorption of Light." *Explore*, Volume 9, Number 2, 1999, explorepub.com/articles/light_therapy.html (August 1, 2006).
- 41 Anna Cocilovo and Ron Rosen. "New Developments in Color Therapy: Acupuncture Meridians Facilitate the Body's Absorption of Light." *Explore*, Volume 9, Number 2, 1999, explorepub.com/articles/light_therapy.html (August 1, 2006).
- 42 Kae Thompson-Liu, email correspondence, August 6, 2006.
- 43 L.L. Candela, H.W. Wallmann, and C.S. Witt, "The effects of a low frequency acoustic waveform on peripheral vascular disease: a pilot study." *Complementary Therapies in Medicine*, 2002, Number 10, 170, 174.
- 44 Harvey W. Wallman and William R. VanWye, "The Effects of an Audible Low Frequency Acoustic Waveform on Osteoarthritis: A Pilot Study." *Journal of Musculoskeletal Disorders and Treatment* 2016, 2:021, Volume 2, Issue 4. [pagination unknown] clinmedjournals.org/articles/jmdt/journal-of-musculoskeletal-disorders-and-treatment-jmdt-2-021.php?jid=jmdt (April 19, 2018).
- 45 Sean Martinez, email correspondence, April 27, 2018.
- 46 Irena Cosic and Drasko Cosic. "Influence of Tuning Element Relief Patches on Pain as Analyzed by the Resonant Recognition Model." *IEEE Transactions on NanoBioscience*, November 20, 2017, Volume 16, Issue 8, 822, 824.
- 47 Carlos Orozco and Donato Mendez Segura, "The History and Application of the Science that Supports the Development of the Cell Wellbeing App." hydration-app.com/history-and-application.php (June 25, 2021).



Published Studies in Electromedicine

*Don't worry about people stealing an idea.
If it's original, you will have to ram it down their throats.*

—HOWARD AIKEN, AMERICAN COMPUTER PIONEER AND PHYSICIST (1900–1973)

There are thousands of articles in medical and scientific journals on the use of electromagnetic fields, electric fields, electrical current, static magnetic fields, pulsed magnetic fields, frequency-induced diathermy (heat) and more, to treat all kinds of conditions, ranging from bone fractures and muscle sprains to Parkinson's and cancer.

Special mention should be made of treating cancer with hyperthermia: a simple, safe, and effective method. During hyperthermia, most of the body or selected smaller areas are safely subjected to high temperatures. The cancerous tissue is either killed directly by the heat, or it becomes so permeable that only minute amounts of locally injected chemicals are needed to destroy it (thus avoiding the chemical poisoning of the entire system). The clinical use of hyperthermia is not new. It was routinely employed seven thousand years ago in Egypt, and has been used by Western physicians for about 200 years. Yet despite the article “Hyperthermia, still experimental, may win place in cancer therapy”—which appeared in a 1981 issue of the *Journal of the American Medical Association*—few people with cancer today are given the option of receiving heat treatments.

My very small sample lists titles of articles from the most recent back to the 1970s, as well as titles of entire books on electromedical modalities that were published over one

hundred years ago. Of the journal articles, I include peer reviewed titles that for the most part are in English. The therapeutic effects of various EM fields is emphasized, as my purpose here is to cite articles examining the *healing potential of electromagnetic therapies that use frequencies in beneficial ranges and amounts*. For literature on the harm of EM fields—such as from cell phone radiation and high tension wires—see Appendix I, “Recent Studies on the Dangers of Harmful Electromagnetic Fields (EMFs).”

The majority of authors write about the practical applications of frequencies to treat disease conditions that include bone breaks, cancer, neurological degeneration, and infections. Other authors discuss how to evaluate or improve the equipment used to disseminate the therapies, while still others address the effects of different frequencies on specific biological functions, such as enzyme and immune cell production. In a few instances, I mention which frequencies were used in the clinical trials. Some are well known to rifers.

Many of the articles describe Rife's technology without using his name or referring to his research or clinical trials. For example, the abstract of a 2009 paper, “Amplitude-modulated electromagnetic fields for the treatment of cancer: Discovery of tumor-specific frequencies and assessment of a novel therapeutic approach,” states in part:



ENDNOTES

Appendix D

SELECTED PUBLISHED STUDIES IN ELECTROMEDICINE

- 1 A. Barbault, F.P. Costa, B. Bottger, R.F. Munden, F. Bomholt, N. Kuster, and B. Pasche, "Amplitude-modulated electromagnetic fields for the treatment of cancer: Discovery of tumor-specific frequencies and assessment of a novel therapeutic approach." *Journal of Experimental and Clinical Cancer Research*, April 14, 2009; 28:51. Abstract, ncbi.nlm.nih.gov/pubmed/19366446 (November 3, 2010).
- 2 Pierre Le Chapellier and Badri Matta, "Is Victory over Pancreatic Cancer Possible, with the Help of Tuned Non-Invasive Physiotherapy? A Case Study Says Yes." *Journal of Cancer Therapy* 2014, Volume 5, Number 5, 460.



Rife Research in the United States

*Only a fool of a scientist would dismiss the evidence and reports in front of him
and substitute his own beliefs in their place.*

—PAUL KURTZ, PHD (BORN 1925)

PROFESSOR, AUTHOR, EDITOR, PUBLISHER, ALSO KNOWN AS THE “FATHER OF SECULAR HUMANISM”

In August 2009, scientific research was begun in Philadelphia, Pennsylvania, that involved the assistance of established (mainstream) medical personnel and actually included the name “Rife” in its title. Anthony G. Holland, PhD, a music professor known for his conducting, composing and performing, had learned of Rife therapy and recognized its value. With the cooperation of inventor-chiropractor James Bare, he made several presentations with a Bare-Rife plasma frequency device and secured the help of several scientists, including the director of a cancer lab who has a PhD in oncology from Johns Hopkins University.

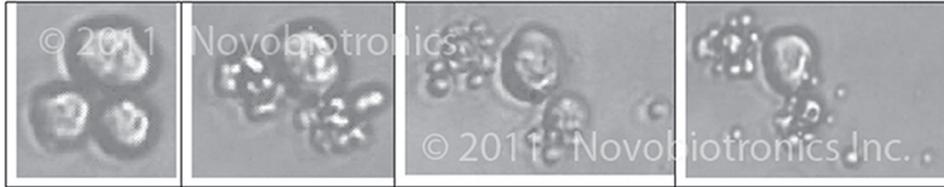
Dr. Holland’s background in digital waveform synthesis and analysis, acoustics and physics—along with his interest in health and frequency therapy—made him ideal to organize and supervise the research team. The research, which is ongoing, is called “Plasma Emission Field Treatment,” or PEFT. Novobiotronics Inc., a non-profit corporation (www.novobiotronics.com), was formed to fund the studies showing the effects of the Bare-Rife device on cancer cells and pathogens. (The company calls the equipment a “Rife-Bare” device. Like some other rifers, I put Bare’s name first because the machine is contemporary and was not designed by Rife.)

The researchers are still collecting data and plan to publish the results of this and future experiments, the identities of all team members, and the frequencies and pulse rates used with the many experimental cell cultures.

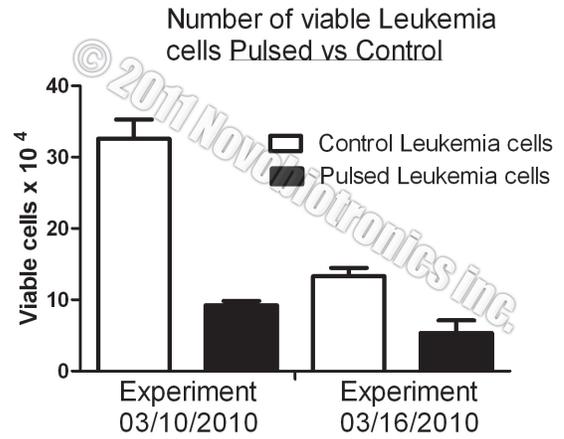
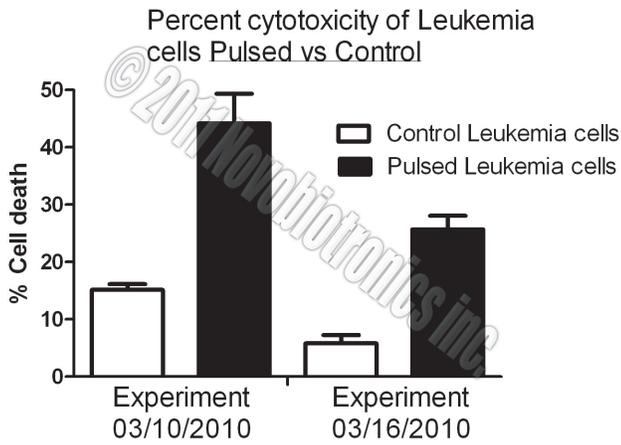
There is more information to be learned; but so far, the results are very promising. The Bare-Rife machine has proven capable of destroying, *in vitro*, pancreatic, ovarian and leukemia cancer cells, as well as slowing their growth. The earliest experiments on human pancreatic cancer cells caused dramatic changes in cell *morphology*, which is the size and shape of cells. These changes can cause cells to grow at a slower rate than normal (desirable in the case of cancer).

“The cancer cells,” Dr. Holland explained in an email correspondence sent July 13, 2011, “are grown in special plastic dishes . . . where they establish themselves and start to grow very rapidly, much the way a cancer tumor grows in the human body. . . . It’s very easy for the cancer researchers to simply count how many cancer cells were killed by the new treatment.”

Data from the leukemia cell experiment is shown on the next page. This particular test, under the auspices of Dr. Holland, was conducted over the course of four months from 2009–2010, at the Division of Surgical Research of Thomas Jefferson University Medical College, with a special prototype plasma device designed and built by Dr. James Bare. The data shows that certain types of cancer cells can be killed *in vitro* (graph, left) and simultaneously slowed in their growth rate (graph, right). The term “pulsed” in the charts refers to cells that were exposed to the Bare-Rife machine.



Above: Human leukemia cells breaking up under PEFT.
 The same three leukemia cells are shown throughout the montage.
 Two cells are undergoing a morphological transformation
 and eventual breakup, caused solely by PEFT.



Photomontage and charts courtesy of Dr. Anthony G. Holland, Novobiotronics Inc.



At-A-Glance Review of Common Toxic Chemicals

“Growth” and “progress” are among the key words in our national vocabulary. But modern man now carries Strontium 90 in his bones . . . DDT in his fat, asbestos in his lungs. A little more of this “progress” and “growth,” and this man will be dead.

—MORRIS K. “MO” UDALL, PhD (1922–1998)

PROFESSIONAL BASKETBALL PLAYER, ATTORNEY, AND STATE OF ARIZONA CONGRESSMEMBER

The following pages contain an overview of common chemicals we use in our daily lives. Not all of the chemicals produce every single damaging effect that’s listed. However, an overall pattern emerges. Most of the chemicals listed are dangerous, and only a few are safe or relatively safe. Carefully read the labels of whatever products you buy or use.

Keep in mind that this is not a comprehensive list, as thousands of new chemicals are created each year. However, this Appendix provides some basic guidelines so you know what to look for when you purchase products ranging from personal care items to carpeting. As more people refuse to purchase products that destroy our health and pollute the environment, manufacturers will seek safer substitutes to comply with the demands of the marketplace.

To keep current with safety information on already existing chemicals and new chemicals that are constantly being manufactured, go to the online database of the Environmental Working Group (which also has a cosmetics section): www.ewg.org. The EWG database grades chemicals according to risk levels—high, medium, or low risk.

Relative risk is an important consideration. If you have a generally useful product that contains mostly safe ingredients and just one or a few synthetic chemicals whose toxicity risks are quite low, it might be worth using it. The EWG database can help you decide.

The data on the following pages were obtained from a number of different sources. Keep yourself informed, as older chemicals are often phased out when new chemicals are created.

FRAGRANCES AND FLAVORS (SYNTHETIC)

Overview

This is a very broad category. The terms “fragrances” and “flavors” are often used together and interchangeably because they’re chemically related and frequently come from the same source. Because their ingredients are permitted by the FDA to be defined as trade secrets, companies aren’t legally required to list them or divulge the formulas. Fragrances and flavorings are not required to be labeled “artificial” and legally they can be called “natural.” You are probably safer if the label is specific (as in “contains real orange oil extract”), rather than general (as in “natural flavors”). However, in some products that are genuinely natural—as we would commonly define the term—the FDA *requires* the label to include the phrase “natural flavors.” Therefore, unless the customer speaks to an honest and knowledgeable representative at a company, it can be difficult to know exactly what’s in a product.

At least half of the additives to foods are synthetic flavorings. Even if a label reads “contains natural flavors,” the flavors are legally allowed to be adulterated or comprised entirely of synthetic chemicals.

Fragrances and flavors are used in any and all items. Synthetic fragrances can contain up to 5,000 hydrocarbons (derived from petroleum or natural gas) and as many as 200 other ingredients, which instead of being listed separately can simply say “fragrance.” After processing, their main component is poisonous alcohol solvent (which can also be burned as fuel).

In *Beauty To Die For*, Judi Vance cites studies showing that 71% of patients who inhaled a popular perfume had markedly diminished blood flow to the brain. Although the effect was temporary, consider what happens to someone who constantly reapplies perfume with the intent of making the odor linger.

Ethyl acetate is only one example of thousands of flavors/fragrances. In *A Consumer’s Dictionary of Food Additives, 4th Ed.*, Ruth Winter reports that even though ethyl acetate occurs naturally in apples, bananas, grape juice, pineapple, raspberries and strawberries, the final synthesized product is so highly processed and concentrated that it irritates and eventually depresses the central nervous system. Ethyl acetate can also cause kidney and liver damage due to prolonged inhalation. Because the chemical acts as a solvent on fats, it causes the skin to dry and crack, which can promote secondary infections.

What follows is just a tiny sample of synthetic fragrances and flavors, as there are far too many to list them all.

The Chemicals

Acetanisole
 Acetophenone / Acetyl Benzene / Benzoyl Methide
 Acetyl Acetone / Acetoacetone / Diacetyl Methane
 Acetyl Hexamethyl Tetralin
 Allyl: Anthranilate, a-Ionone, Butyrate, Caproate, Heptanoate, Hexanoate, Isothiocynate, Mercaptan, Phenylacetate, Phenoxyacetate, Propionate, Sorbate, Sulfide, Tiglate, 10-Undecenoate**
 Allyl Cyclohexane: Acetate, Butyrate, Propionate
 Amyl: Acetate, Butyrate, Formate, Hexanoate, Octanoate, Propionate, 2-Furoate [also look for these words with numbers]**
 a-Amylcinnamaldehyde [anything]
 a-Amylcinnamyl: Acetate, Alcohol, Formate, Isovalerate
 Anisole
 Anisyl Acetate, and Anisyl Alcohol, Butyrate or Formate
 Anthranilic Acid / Methyl Ester / Cinnamyl Ester
 Aspartame (see Chapter 1)
 Benzaldehyde and Benzaldehyde: Dimethyl, Acetal, Propylene Glycol Acetal, Glyceryl Acetal
 Benzyl Butyrate
 Butyl Stearate and Butyl Ether
 Diethyl: Aspartate, Acetaldehyde, Malonate, Sebacate, Succinate, Tartrate
 Dihydro Carveol
 Dihydro Coumarin
 Ethyl: Acetate, Acetoacetate, Acetone, Acrylate, Anthranilate, Benzoate, Caproate, Decanoate, Glutamate, Hexanoate, Lactate, Maltol, Methylphenylglycidate, Myristate, Nitrite, Oleate
 Methyl propyl ketone (MPK) / 2-Pentanone
 Monosodium Glutamate (in Hydrolyzed Soy, Vegetable/Yeast Proteins/Extract, Sodium Caseinate; see Chapter 3)
 Nonalol
 Nonanal/Pelargonic Aldehyde
 Formate
 Phenyl [with a number]
 Phenylacetaldehyde [anything]
 Phenylpropyl [with a number and usually another word]
 Piperonal (Heliotropin)
 Piperonyl Acetate, Aldehyde, Butoxide, Isobutyrate
 Pyruvaldehyde/Acetyl Formaldehyde/Acetyl Formic Acid
 Saccharin++

** “Allyl” means “derived from allyl alcohol.” Not everything with “allyl” is poisonous. The herb tarragon contains a naturally-occurring compound p-allyl anisole.

++Saccharin, used to sweeten toothpaste and foods, is a recognized carcinogen.

Found In

Dishwashing detergent, fabric softener, oven cleaner, window and glass cleaner, antifreeze, air freshener, furniture polish, shoe polish.

Nail polish and nail polish remover.

Shampoo, hair conditioner, hand and body soap, moisturizer, hand lotion, skin cream, antibacterial lotion, toothpaste, perfume and cologne, aftershave lotion, shaving cream, foundation and body powder, bubble bath and bath salts, deodorant, antiperspirant, lipstick.

Disposable wipes, sanitary napkins, antiperspirant, deodorant, talcum powder, feminine hygiene spray, tissues, toilet paper, tampons, disposable towels for babies.

Medicines of all kinds, including cough suppressant.

Ice cream and other dairy products, ices, candy, baked goods, icing, beverages (tea, coffee, soda), spices, syrups, chewing gum, pudding and gelatin desserts, liquor, condiments, meats, shortening.

Ethyl acetate and amyl acetate are used as a nail polish solvent and a flavoring for candy, baked goods, liquor, ice cream, chewing gum, condiments, gelatins and puddings. The term “ethyl” signifies a hydrocarbon that is derived from natural gas.

Effects

Skin rashes, blisters, changes in coloration of the skin. Digestive disturbances, including vomiting and diarrhea. Muscular aches and pains, including shoulder and chest pain; numbness. Violent coughing. Irritation of mucous membranes. Allergies, including sneezing. Sluggishness, fatigue. Headaches, mood swings and irritability, dizziness and vertigo, confusion, central nervous system and emotional depression, hyperactivity, convulsions. Coma. Narcotic. Kidney and liver damage. Reproductive, birth, fertility and fetal disorders.

HEAVY (TOXIC) METALS**Overview**

Heavy metals don't belong in the body. Even if a toxic metal is an unbound mineral with a name like potassium or calcium, it's very different from a mineral *compound* such as (for instance) potassium aspartate or calcium lactate that's bioavailable to the body. In a mineral-deficient individual, the body—unable to distinguish between nutrient minerals and toxic metals/minerals—will absorb the toxic and not the bioavailable substances.

Many pigments are prepared with various forms of aluminum, barium, strontium, and other heavy metals that fix the colors and prevent them from being dissolved in water. (Also see **Dyes**.) A metals that's toxic in any form, such as aluminum, can appear by itself or as part of a compound (such as aluminum chlorohydrate).

The Chemicals

Aluminum [anything]
 Antimony [anything]
 Arsenic [anything]
 Barium [anything]
 Cadmium [anything]
 Calcium: Carbonate, Chloride, Cyanamide
 Chlorides as a group (except for Sodium Chloride)
 Chromium: Nitrate, Oxochloride, [number] Oxide
 Cobalt
 Copper/Cupric Cyanide
 Iron Oxide
 Lead [anything]
 Mercury [anything]
 Nickel [anything]
 [anything] Oxide
 Potassium: Chromate, Hydroxide, Salt of Iodeosin (See **Preservatives** for details on Potassium Sorbate)
 Silver Chloride***
 Silver Nitrate***
 Silver Oxide***
 Strontium [anything]
 Titanium Oxide/Dioxide
 Vanadium
 Zinc Oxide
 Zinc Potassium Chromate
 Zinc Stearate
 Zirconium

****Colloidal* Silver is an entirely different substance that's safe and beneficial; see Chapter 3.

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Safe Substitutes for Common Toxic Chemicals

Not all chemicals are bad. Without chemicals such as hydrogen and oxygen, for example, there would be no way to make water, a vital ingredient in beer.

—DAVE BARRY (BORN 1947)

PULITZER PRIZE-WINNING AMERICAN AUTHOR AND HUMORIST

BETTER LIVING THROUGH CHEMISTRY?

“Better living through chemistry” is a long-lived variation of an advertising slogan that DuPont, the chemicals manufacturer, promoted from the 1930s to the 1980s. It persuaded consumers to discard safe, effective natural ingredients and replace them with synthetic garbage.

Each week, thousands of new chemicals are manufactured that—incredible as it sounds—aren’t tested for safety. In our everyday lives, we are constantly exposed to pesticides, fertilizers, and volatile organic compounds (VOCs, among which are formaldehyde, toluene, benzene, and styrene). VOCs are found in antifreeze, carpet, disinfectant, laundry detergent, polishes and varnish, shampoo, and even packaged foods. Toxic heavy metals (such as cadmium, lead, mercury and unbound, non-nutritional zinc) are in cleaners, cosmetics, paints and solvents. Detergents, heavy metals and solvents are in cleaners, soaps and personal care products. Acetone, benzene, ethylbenzene, formaldehyde, phthalate, styrene, toluene, xylene and heavy metals are in carpets. Most clothing, unless specified otherwise, is treated with fire retardant and fabric softener. Deodorizers and mothballs are made from dangerous petrochemicals. Fertilizers also contain petrochemicals. Pesticides, insecticides, fumigants, and fungicides are registered poisons with the

United States government. They are sprayed onto our crops and are embedded in cooking utensils and children’s toys. (For an extensive list, see Appendix F, “Dangerous Chemicals, Contaminants and Toxins.”)

People in industrialized countries, including North America, have been brainwashed to not only accept, but *demand*, the presence of dangerous chemicals in their daily lives. Harmful chemicals are around us everywhere we look and in some places that we cannot imagine: in the home and workplace, in schools and hospitals, in restaurants and gyms, in recreation areas and landfills. Sadly, these chemical contaminants pollute the environment while impairing the health—and in many cases, causing the death—of humans, animals, and plants.

Most of us cannot control or eliminate all of the dangerous chemicals used by industry. However, we *can* control what’s in our homes. We are told that every item in our home requires a different cleaning product. But cleaners contain the same basic ingredients: a solvent (to cut grease), and color and fragrance to presumably make the product more appealing. It’s time to stop making chemical manufacturers rich while we kill ourselves. Let’s simplify our lives by throwing out toxic cleaners and pest control substances that are taking up space. Instead of poisons, we can use the safe, effective, simple ingredients listed on the following pages.

Personal Care

22. Bathing

- ◆ **Enviro-One™**. Use suggested dilution. As with all soaps, leave on 30 seconds to eliminate bacteria, wash off. If you want more suds, use a dispenser that adds air to the liquid so it foams. You can add a few drops of your favorite essential oil if you like.
- ◆ **Dr. Bronner's**. Use diluted. Comes in plain castile or with pure, great-smelling essential oils. Lavender, rose and almond are a bit milder than the peppermint, tea tree, eucalyptus or even the citrus.

23. Deodorant / Antiperspirant

Commercial products mask armpit odor with strong perfumes chemically related to petroleum. Antiperspirants inhibit sweating (a natural bodily function), which prevents wastes from exiting through the skin. Most contain toxic aluminum that clogs pores and prevents the sweating that causes odors—but still seeps into the lymph nodes and travels to the breasts. Aluminum is linked to breast cancer and is a neurotoxin (associated with Alzheimer's, Parkinson's and dementia). Safe deodorants are commercially available, but you can make your own inexpensively. Essential oils kill bacteria.

- ◆ **Hydrogen Peroxide, 3%**. Spray under arms as often as needed.
- ◆ **Colloidal Silver**. Spray under arms as often as needed.
- ◆ **Essential Oils, especially Lavender**. The oils should be organic, with nothing added. Add between 10 and 20 drops of oil to several ounces of water. Spray under arms.
- ◆ **Baking Soda (Bicarbonate of Soda) or Arrowroot**. Dust underarms with either powder. If you like, before applying, spray on essential oils, colloidal silver, or peroxide for additional protection.
- ◆ **Grapefruit Seed Extract**. Wet armpit. Apply two drops of GFSE under arms as often as needed.
- ◆ **Commercial Natural Preparation: For Pit's Sake!** (a G.B. Proudfoot's product).

24. Facial Cleanser

- ◆ **French Green Clay**. Make paste with pure water for a mask. Wait until it dries; rinse. This will draw out dirt and bacteria. (Re-moisturize with grapefruit essential oil added to refined coconut oil.)

25. Shampoo (Humans and Animals)

Unlike even soaps of pure glycerine or simple castille, Enviro-One™ doesn't leave residue on skin. It works great for human shampooing and on dogs, too. You can add a few drops of your favorite essential oil if you like.

- ◆ **Enviro-One™**. Use dilution suggested by company.

26. Shampoo for Fleas, Ticks and Head / Body Lice

- ◆ **Enviro-One™**. Use suggested dilution. Kills harmful insects (ticks, fleas and lice) by suffocating them. Leave on hair and body for 30 minutes, then rinse. Comb hair with fine tooth comb to eliminate eggs. Reapply if needed. This is the only product I can recommend for this purpose.

27. Talcum Powder

The minerals that comprise talc are near deposits of carcinogenic asbestos, and become contaminated.

- ◆ **Arrowroot or Baking Soda (Bicarbonate of Soda)**.

28. Teeth and Gum Care (tooth powder, toothpaste and mouthwash)

All these ingredients can be used interchangeably for the teeth and gums. For tooth paste instead of powder, add coconut oil (which has antimicrobial properties) to bind the ingredients together. For a mouthwash, use aloe vera liquid. Some ingredients may work better for you than others; experiment.

- ◆ **Essential oils**: Clove. Cinnamon bark. Spearmint. Peppermint. Tea tree. White oak bark (in powder form too). Grapefruit seed extract. Aloe vera (gel or liquid). As powders or granules: Baking soda. Sea salt. Xylitol. By itself: Colloidal silver. To increase gum circulation: Cayenne (small amount).
- ◆ **Commercial Natural Preparations, Toothpaste**: Coral White®. Pearlie White® (remineralizes teeth).
- ◆ **Commercial Natural Preparations, Gums**: Tooth & Gums Tonic®. Peri-Gum®.



Create a Detox Footbath for Ten Dollars

Be sure you put your feet in the right place, then stand firm.

—ABRAHAM LINCOLN, 16TH PRESIDENT OF THE UNITED STATES (1809–1865)

History and Theory of How This Works

The detoxification footbath was developed circa 1900 in London. It consisted of two tanks, each containing water and an electrode, into which a foot was placed. Very mild current passed through the body, allowing metals and other substances to be drawn out of the body via osmosis.

Modern commercial footbaths contain a single chamber that accommodates both feet and both (positively and negatively charged) electrodes. The water tends to become a bit darker during the soak. Aficionados report feeling better, citing the change in water color as proof that the footbath works. Detractors point out that the tint of the water changes after the electrodes are turned on, without anyone ever placing their feet in the chamber!

The detractors are correct. Changes in water color are due to rust or other metallic accumulations on the iron electrodes. These gadgets are outrageously overpriced (some at over two thousand dollars), accompanied by marketing hype to justify the cost. Nevertheless, the basic premise is sound—drawing toxins from the body via a non-invasive electrical charge—as long as there are two separate tubs for the feet and one electrode is in each tub. Most toxins have a positive charge. Positively-charged toxins are attracted to a negatively-charged electrode. In the following setup, users find that if the water does change color, it's the negatively-charged side that becomes discolored while the positively-charged side does not.

Supplies

You can make your own effective apparatus for about ten dollars with simple parts bought from a basic electronics store or hardware store.

- ◆ Two shallow plastic bins the size of shoeboxes, each large enough to hold a single foot. Make sure they are plastic and not metal. (The 9-volt battery you'll use isn't strong, but it still might cause an unpleasant jolt if you use a metal pan rather than plastic.)
- ◆ Filtered or distilled water.
- ◆ Celtic, sea, Dead Sea, or Epsom salt.
- ◆ Two stainless steel spoons, bent in a certain way (see photo, next page).
- ◆ One 9-volt battery.
- ◆ Two “alligator” clips of different colors. One wire will connect to the positive side of the battery, and the other wire will connect to the negative side of the battery (see photo, next page). In the United States it's customary to use black and red, but any two colors can be used as long as you dedicate one alligator clip to the POSITIVE side of the battery and the LEFT foot, and the other alligator clip to the NEGATIVE side of the battery and the RIGHT foot. For this discussion, I will use the colors red and black.

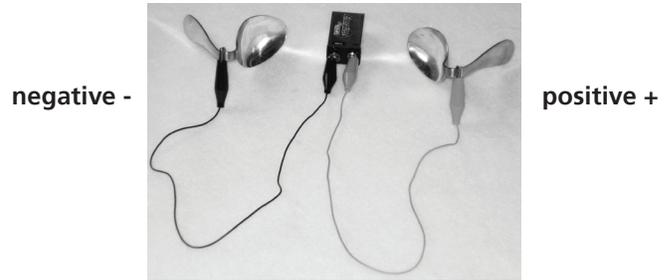
Directions

1. *Water.* Put at least 2–3 inches of warm filtered or distilled water into each bucket.
2. *Salt.* Mineral salts enable water to conduct electricity more easily. If you use distilled water, add a half a teaspoon or a teaspoon of Celtic salt, Dead Sea salt, plain sea salt without additives, or Epsom salt into each side and stir. If you're very sensitive, you'll need just a little salt or no salt. If the water already contains a fair amount of minerals, you won't need to add salt.
3. *Bend the Spoons.* One good way for the spoons to act as electrodes is to bend them (photo, opposite) so that each one hangs over the side of a bin (photo, below). This allows you to connect an alligator clip to the stem of the spoon with the bowl of the spoon in the water.
4. *Wire the Spoons.*
Attach the RED (POSITIVE) alligator clip to the bowl of the LEFT-hand spoon.
Attach the BLACK (NEGATIVE) alligator clip to the bowl of the RIGHT-hand spoon.
(We are assuming that the wires are red and black, but you can use any color wires as long as the POSITIVE terminal is for the LEFT foot and the NEGATIVE terminal is for the RIGHT foot.)
Hang one spoon over each bin. You may bend the spoons so that the bowls reach lower into the water, which will allow you to use less water.
5. *The Footbath.* Put one bare foot in each spoon-filled tub *before* you connect the alligator clips to the battery.
RIGHT foot = NEGATIVE (BLACK) side.
LEFT foot = POSITIVE (RED) side.



Viewed as though you were looking at someone else doing a footbath.

6. *Wire the Battery.* On the 9-volt battery:
Attach the other end of the RED alligator clip to the POSITIVE (+) terminal. POSITIVE will go with the LEFT side.
Attach the other end of the BLACK alligator clip to the NEGATIVE (-) terminal. NEGATIVE will go with the RIGHT side.
Your footbath is now charged. Leave your feet in for 30 minutes to one hour.



Viewed as though you were looking at someone else doing a footbath.

7. *Change the Spoons Periodically.* Most so-called stainless steel contains some nickel and chromium (not in their bioavailable mineral forms, but in their toxic metallic forms). After a period of being electrolyzed in water, the stainless steel will degrade, even if only a bit, which will allow metallic ions to disperse into the water where they can be absorbed through the feet.
Some types of stainless steel are safer than others. T304 alloy stainless steel (an industrial term for grading stainless) is more susceptible to erosion than the safer T316, which is created to withstand corrosion in saltwater environments.
Change the spoons periodically, especially if you are doing many footbaths.
Instead of spoons, you can use carbon electrodes.
8. *Use As Often As Needed.* You may feel areas of your feet (especially the top or instep) sting and itch a bit, but this is normal. If you're too uncomfortable, reduce the amount of salt in the water, the amount of time you spend soaking your feet, and/or the amount of water.
This footbath helps eliminate Lyme and mold toxins, heavy metals, and some chemicals. People with certain infections, fibromyalgia, rheumatoid arthritis, and some neurological conditions report feeling better after a series of footbaths. Soak your feet at least once a day. Some people can handle only 5 minutes at first, and gradually increase the time. The water in the left side especially may change color slightly as toxins are released.



Recent Studies on the Dangers of Harmful Electromagnetic Fields (EMF)

Technology can be our best friend, and technology can also be the biggest party pooper of our lives. It interrupts our own story, interrupts our ability to have a thought or a daydream, to imagine something wonderful, because we're too busy bridging the walk from the cafeteria back to the office on the cell phone.

—STEVEN SPIELBERG, FILM DIRECTOR (BORN DECEMBER 18, 1947)

Electromagnetic (EM) fields surround us all the time. The natural diffuse EM radiation emitted by the sun is very different from the human-made, concentrated, EM radiation from cell phones, TV and radio transmitters, computers, WiFi, tablets, smart meters, microwave ovens, kitchen appliances, vacuum cleaners, air conditioners, airport scanners, and anything with an engine (to name just a few items in our technological age). These electronics break the chemical bonds in our DNA, leading to almost unlimited malfunctions in all systems: immune, nervous, hormones, respiratory, circulatory, digestive. There's no part of the body that doesn't react negatively to these harmful electromagnetic fields, which are sometimes referred to as *EMFs*, *electrosmog*, or *electropollution*.

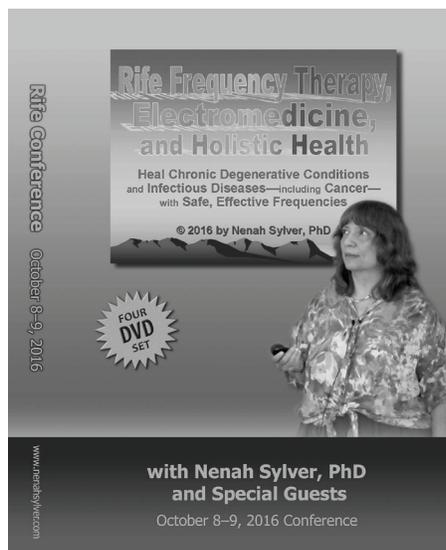
Despite copious documentation showing the damage caused by electropollution, many governments, their agencies, and the telecommunications industry deny that harm exists. Corporate media typically lies, insisting that there's nothing to worry about and implying that anyone who's concerned is being paranoid, irrational, and idiotic. However, at the University of Washington, Dr. Henry Lai's data on radio frequency studies shows a

very different story. In the studies that are *not* funded by the telecommunications industry, 70% clearly indicate the harm of WiFi (with 30% showing “no effect”); while in the studies that *are* funded by the telecommunications industry, only 32% show harm (with the “no effect” category spiking to 68%). In June 2015, investigative journalist Norm Alster at the Harvard University Center for Ethics issued a paper called “Captured Agency: How the Federal Communications Commission Is Dominated by the Industries It Presumably Regulates.” And some readers might be surprised to learn that as long ago as 1971, the United States Navy commissioned a compilation of over two thousand studies on the effects of microwaves and radio frequencies on living systems. Even then, there was grave concern about how various human-made EM fields could (and did) negatively affect humans and animals.

Here is a very small sample of studies on the dangers of electrosmog. New research is constantly being published (despite the resistance of those who'd like to conceal it), so keep current. In the meantime, see Chapter 1 for more details on how and why EMF is harmful, and be sure to use EMF protection (see Appendices A and C).

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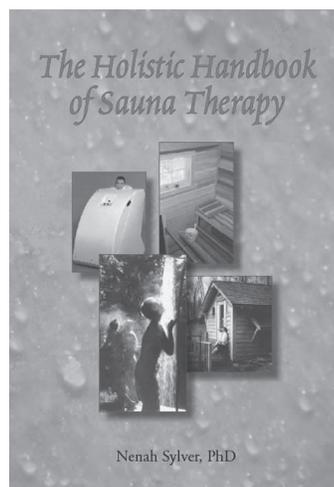
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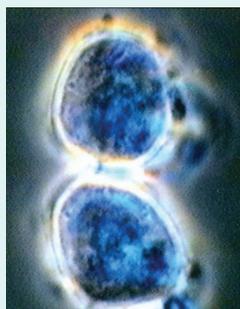


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—Steve Haltiwanger, MD, CCN
lecturer, researcher, and consultant in
psychiatry, Rife Therapy,
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—Martha M. Grout, MD, MD(H)
Arizona Center for Advanced Medicine
Scottsdale, Arizona



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