

PRIMAL BODY, PRIMAL MIND



Beyond the
Paleo Diet
for Total Health
and a Longer Life

Nora T. Gedgaudas, CNS, CNT

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Total Health and a Longer Life

NORA T. GEDGAUDAS, CNS, CNT



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For Lisa, without whose tireless dedication and support this book would not have been possible. Also this book is for all those in my life who have relentlessly supported me, my heart, and my work. You have my eternal love and gratitude.

And finally, for our ancestors, who hold an important key for all of us to the future of our survival.



"The writer is fully aware that his message is not orthodox; but since our orthodox theories have not saved us we may have to readjust them to bring them into harmony with Nature's laws. Nature must be obeyed, not orthodoxy."

WESTON A. PRICE,
NUTRITION AND PHYSICAL DEGENERATION (1939)

PRIMAL BODY, PRIMAL MIND

“For those of us who suffer from life-altering illnesses, *Primal Body, Primal Mind* is a clean slice through the cultural fog of bad nutrition and worse science in which we’ve been lost for a generation. If you wonder—especially out loud, to doctor after doctor—why it still hurts, then open this book and start reading. You have found your champion, and she comes bearing answers. Did I mention five stars? This book is fabulous.”

LIERRE KEITH, AUTHOR OF *THE VEGETARIAN MYSTERY*

“If you want to *really* know about how your brain and body work, read this book!”

THOM HARTMANN, AUTHOR OF *THE EDISON GENIUS*
ADHD AND THE GIFT OF THE HUNTER CHILD

“Nora Gedgudas has loaded *Primal Body, Primal Mind* with the information and resources essential for anyone who hopes to survive the 21st century in mental and physical health.”

JULIA ROSS, AUTHOR OF *THE DIET CURE AND THE MOOD CURE*
AND EXECUTIVE DIRECTOR OF THE RECOVERY SYSTEMS CLINIC

“I consider Nora’s work to be the definitive statement on the nutritional needs of the brain. It is required reading for all of my patients and for anyone with an interest in maintaining their own vitality throughout their life.”

GLEN ZIELINSKI, D.C., D.A.C.N.B., ASSISTANT PROFESSOR OF CLINICAL
NEUROLOGY AT CARRICK INSTITUTE FOR GRADUATE STUDIES

“As an investment advisor, I stress the importance of health to my clients and subscribers. Why? Because a clear mind and strong body are the first step to creating and keeping your wealth, whether it is personal or financial. Yes, we can understand how our mind and bodies function! Yes, we can feed ourselves the nutritious food that makes us powerful! Nora Gedgudas’s *Primal Body, Primal Mind* teaches you essential knowledge you need to survive and *thrive* in the 21st century.”

CATHERINE AUSTIN FITTS, FOUNDER AND
MANAGING MEMBER OF SOLARI INVESTMENT ADVISORS

“These days, hormones are a hot topic. In *Primal Body, Primal Mind*, Gedgudas focuses on the hormones that are commonly imbalanced and problematic to the American population, contributing to symptoms such as weight gain, low energy, poor mood, and even premature aging. In clear and simple terms Nora describes the root of these problems and outlines solutions that are effective and easy to apply. This is the book you want to read.”

JANET R. LANG, D.C., AUTHOR, EDUCATOR, AND
FOUNDER OF RESTORATIVE ENDOCRINOLOGY

“Nora Gedgudas lights a path toward dietary discretion and natural health that obliterates much of the standard dietary doctrine along the way. Larger truths have a tendency to be simple. It is so here and so well.”

SIEGFRIED OTHMER, PH.D., COAUTHOR OF *ADD: THE 20-HOUR
SOLUTION* AND CHIEF SCIENTIST AT THE EEG INSTITUTE

“*Primal Body, Primal Mind* covers a wide range of health topics but ties them all back to one central

idea: physically, we are virtually identical to our Paleolithic ancestors. We may drive minivans and listen to modern jazz on iPods, but our bodies and brains haven't really evolved past the Stone Age. Overall, an excellent read and an excellent resource."

TOM NAUGHTON, COMEDIAN, FORMER HEALTH WRITER, AND CREATOR OF *FAT HEAD*

"It's a health plan so easy even an unga bunga caveman can do it! Gedgaudas uses humor, science-based facts, and common sense to debunk many of the myths we have been told about weight and health control in the 21st century. In the world of healthy high-fat, low-carb nutrition research and education, this is yet another book to complement your healthy lifestyle change."

JIMMY MOORE, AUTHOR OF *LIVIN' LA VIDA LOW CARB*

"Nora explores where our dietary requirements originated and how they affect our mood and vulnerability to diseases and explains the complex issues of nutrient assimilation, digestion gluten sensitivity, and celiac disease. Find out if you're a fat burner or a sugar burner, learn the bad news about gluten, soy, milk proteins, and the nutritional bases for depression, ADHD, and other common disorders. This book is so much more than another 'what to eat' book."

JULIE HOLLAND, M.D., AUTHOR OF *THE POT BOOK* AND *WEEKENDS AT BELLEVUE*

Cautionary Note and Disclaimer

I am not a physician; I am a nutritional therapist and cannot and do not prescribe. The information provided here is for educational purposes only. Any decision on your part to read and use this information is your personal choice. The information in this book is not meant to be used to diagnose, prescribe for, or treat any illness. Please discuss any changes you wish to make to your medical treatment with a qualified, licensed health care provider.

Although millions of people have been able to transition to a very-low-carbohydrate diet without documented harm, there are some people for whom a low-carb diet must be approached with some caution.

If you are taking medication to control your blood sugar or blood pressure, you may need to quickly reduce the dosage and may need to discontinue this medication altogether if you significantly restrict your carbohydrate intake. **This is best done under the supervision of an experienced and qualified licensed health care provider.**

Although the diet advocated in this book stresses the consumption of only moderate levels of protein and is not a “high-protein diet,” for anyone who has serious kidney disease, any increase in dietary protein can potentially be a problem. If you have kidney disease, you should consult your doctor before making any changes to your diet.

If you have gallbladder attacks or gallstones, you should exercise extreme caution where increasing dietary fat is concerned and you may first need to resolve this issue with your trusted and knowledgeable licensed natural health care provider before embarking on any major dietary change.

Anyone who has any other serious illness such as unstable cardiovascular disease, cancer, or liver disease needs to exercise caution if making dietary changes. You should consult your physician for guidance.

Finally, if you are pregnant or lactating, you **should not** overly restrict protein (or fat) intake. Also, young children and teenagers have much more demanding nutrient needs and should not have their protein or fat intake overly restricted. There is still a dietary carbohydrate (sugar or starch) requirement for such individuals, but know that radical changes to your existing diet if you are pregnant—other than eliminating junk foods—may not be advisable and should be approached only under the guidance of a qualified and knowledgeable health care professional.

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Foreword

Mark Steinberg, Ph.D.

In this life, health of mind and body is the big prize. Toward that end, Nora Gedgaudas's *Primal Body, Primal Mind* takes us a long way.

This book is a nutritional treasure map leading to optimal wellness, the way nature intended. The author has outlined and detailed a thorough documentation of nutritional principles and has linked them directly to evolutionary history. More important, she has provided direct guidelines for shopping and eating in ways that will eliminate a host of physiological and mental disorders and restore followers to the natural condition of health and wellness that accrues from eating as we were biologically designed to. Since applying the principles outlined in this book, I have lost forty pounds and enjoy much improved health and well-being.

Primal Body, Primal Mind is loaded with understandable explanations and solutions tied to everyday actions and changes that anyone can make. It is a journey into the realm of biology, politics, and self-care that you will never get from formal academic education. As well as being a gem of nutrition and dietary sense, *Primal Body, Primal Mind* offers comprehensible insights into the biochemistry of behavior and consumerism. Gedgaudas's approach to the (Paleolithic) dietary habits that have sustained humans without pills or potions for millennia stands in stark and welcome truth against the nonsense so relentlessly peddled for our allegiance and dollars.

Gedgaudas teaches things that your mother should have, and she does so without nagging or sermonizing. Her writing is eloquent, factual, and straightforward, and she provides many practical tips, including websites and other resources. Her arguments and data are scientifically documented, and the manuscript is well organized and easily referenced.

Reading Gedgaudas's jewel might make you a bit sheepish about how you've been duped by so many commercial interests, including the diet and publishing industries. Quickly, however, you will be grateful for her leadership out of the wilderness of illness and digestive trickery that so easily nickel-and-dimes us away from truly feeling good and maintaining ourselves and a high quality life.

In reading *Primal Body, Primal Mind*, it becomes obvious that Gedgaudas cares for herself and for others. I know this firsthand, since Nora is a colleague engaged in the clinical practice of EEG neurofeedback. As a neuropsychologist with thirty-five years of experience and the author of two popular books on brain training, mental fitness, and living healthfully, I endorse Nora's reputation and expertise in the clinical care of people by using the scientific techniques about which I have written. She is among the elite of professionals who can restore health and promote growth by harnessing nature's principles with effective care.

I recommend *Primal Body, Primal Mind* to my patients and friends, and I believe that this is "must reading" for anyone serious about health care and self-care.

MARK STEINBERG, PH.D., is a licensed psychologist and a clinical neuropsychologist as well as a

NBC medical consultant. He is the author of *ADD: The 20-Hour Solution* and *Living Intact: Challenges and Choice in Tough Times*.

Foreword

Brent Pottenger

We can't opt out of nutrition. We have to eat. We have to drink. We have to do something about it. But the modern nutritional landscape can be complex and contradictory beyond belief.

One-size-fits-all is a size that fits no one.

Ever since we scientized nutrition, our health states have declined, unfortunately. Decisions about what to eat and drink have morphed from habits of culture—of heritage—to calculated choices based on reductionist nutritional theories, with little consideration for how human beings reached modernity in the first place. Just in the past few decades, for instance, scientific research on what human beings should consume to fuel their metabolism has produced countless conclusions that contradict one another: traditional whole foods like eggs have bounced between heaven (“eggs are good for you”) and hell (“eggs are bad for you”), making stops in dietary purgatory along the way (“more evidence needed to determine the health effects of eggs”). With all this white noise confounding things, it is no wonder that people feel frustrated with food. This trend is unsustainable, and it does not translate into healthy people in the end. Perhaps incorporating insights from the philosophy of science could help resolve our nutritional scientific challenges. When we do this, an important theme emerges: at some point, you have to self-experiment with your personal diet to figure out what works and what does not work for your body, because each person displays biochemical individuality as a result of varying genomic backgrounds and microbiomic makeups.

However, not all self-experimentation starting points are created equal.*¹ Science and history have some important things to say if we approach them the right way. And since you have to start somewhere, some nutritional, scientific, and philosophical tools may help you progress along your personal health journey. To start, modern medicine espouses the slogan “First, do no harm” and emphasize the importance of respecting conservative approaches to healing before resorting to drastic riskier measures. Applying this warning to human nutritional practice seems wise because it challenges everyone to analyze the assumptions underlying their recommendations, theories, and hypotheses. In practice, there are many ways to answer the question What is the safest guide for deciding which foods and drinks to start self-experimenting with? Personally, I answer this question with the intention of doing as little harm as possible, by suggesting that looking at traditional culture and dietary practices is the best place to begin tinkering with foods and drinks. Why? Across the globe and throughout human history, populations consuming diets consistent with their ancestral traditions have averted the *diseases of civilization*, such as diabetes and heart disease, that are harming more and more people in contemporary societies. Notably, examining traditional diets provides a large-scale evolutionary experiment with far more enrollees than we could ever herd into a formal clinical trial test with a double-blind, placebo-controlled intervention experiment. In his noted book *The Logic of Scientific Discovery*, Sir Karl Popper, a philosopher of science who worked extensively on the problem of induction (reasoning from the specific to the general), famously concluded, “The majority of the problems of theoretical philosophy, and the most interesting ones, can be re-interpreted . . . as problems of method” (Popper 2002). Amid the malaise of conflicting information about human di-

available today, a logical method for investigating and understanding nutritional science is to have people self-experiment with diets that are consistent with their ancestral heritage, followed by appropriate responses to physiological feedback, such as inflammation or allergies, to stumble (semiblindly) upon modern diets that are safe, enjoyable, and practical, all at the same time.

To start, some may refute the notion of individuality when it comes to dietary guidelines, but this type of inductive reasoning does not hold up to scientific scrutiny. Each human being expresses what Dr. Roger Williams termed biochemical individuality. Williams captured this sentiment beautifully when he said, “Nutrition is for real people. Statistical humans are of little interest” (Bland 1998). What this amounts to biologically is the reality that each person processes and assimilates nutrients differently. In part, these differences result from genomic and microbiomic diversity.

With the attention that the Human Genome Project has received recently, people are more aware than ever that genes contribute to individual differences among people (Pollack 2010). Yet, perhaps more important, the emerging Human Microbiome Project shows that people contain ten times as many nonhuman microorganismal cells in their bodies than they do human ones, and this has potentially far-reaching implications for human nutritional considerations, disease prevention, and healing interventions (Peterson et al. 2009; Candela et al. 2010; Turnbaugh et al. 2009). Whenever people consume foods and drinks for energy, these nutrients interact with both human and nonhuman cells in concert within their body. On the one hand, the interactions that these nutrients have with human cells can influence genetic expression. In modern scientific parlance, these dynamics fall under the category of nutrigenomics, a subcategory of epigenetics, or even more broadly, functional genomics. These effects, while key to determining our phenotypes, could be trumped by the multidirectional interactions between our diets and our microbiomes. In short, we aren't who we thought we were when it comes to gene–environment interplay. By definition, a microbiome is all the nonhuman microorganisms (and their genetic material) that live in and on a person's body. Given the (hopefully) symbiotic relationship, these microorganisms also consume the foods and drinks that we intake during mealtimes. In response to the environments that these meals produce within our digestive system, microorganisms extract and assimilate nutrients for their own use and benefit. In this way, these microorganisms are intimately linked to our dietary intake habits because they depend on us for energy sources to run their metabolic machinery.

Thus, if each person displays microbiomic individuality because his or her body harbors unique compositions of microorganisms, then it follows logically that this would enhance biochemical individuality even further, over and above the variability associated with human genomics alone (Quinlan et al. 2010). For example, populations of people living in Japan have developed, through lateral gene transfer, the ability to digest seaweed (Hamilton 2010). This type of evolutionary event illustrates concretely how deeply our dietary practices are connected to our microbiomes and how groups of people adapt to their ecological niches in fascinating ways. The new frontier for this nutritional science field could be termed “epimicrobiomics”—a domain where scientists seek ways to alter microbiomic expression in people's bodies by prescribing specific dietary recommendations involving prebiotics (foods and drinks that “feed” beneficial microorganismal growth and maintenance in our digestive system), probiotics (foods and drinks that contain beneficial microorganisms), and/or synbiotics (which combine prebiotics and probiotics synergistically). All these rapidly advancing areas of inquiry seem promising, but when it comes to nutritional scientific philosophy, the most important message that genomics and microbiomics have to share is the working conjecture that each individual has a distinctive genomic background and microbiomic makeup and has distinct nutritional

needs that must be met for optimal well-being.

As a reader of this book, you're beginning a personalized cartographic (mapmaking) exercise, with Nora serving as your insightful guide. To begin, I have to admit a caveat: I'm a big Nora Gedgaudas fan. After all, an author who names a chapter of her book after my ancestor Francis M. Pottenger Jr. M.D., is going to hold a special place in my book.*² So, I'm biased positively toward what Nora has to say. Everything is subjective, anyway.

I happen to think that what Gedgaudas communicates in *Primal Body, Primal Mind* provides self-experimenting *bricoleurs* with an array of logical health conjectures to evaluate, assess, and then perhaps, test on their own bodies via “ $n = 1$ (patient-of-one)” clinical trials. When you read books like this as an *epistemocrat* (someone who holds his or her own knowledge in great suspicion), you simply reflect on and judge them for what the authors intended to accomplish; a single book cannot be all things to all people. Nora, in my opinion, accomplishes what she set out to tackle with this book.

Nora's sharp. And she writes with a memorable, enjoyable punch.

She understands things like the thought-experiment that it's naive to think most plants are our safe and edible friends. From an evolutionary perspective, it seems we'd be wise to be extra careful about the roles of plants in our diets (they may require special preparation and/or cooking, for instance, to be consumed safely); because they've evolved under selection pressures as *immobile* organisms, that is, without the ability to run away or fight back physically, plants protect themselves from herbivores and omnivores by producing, holding, and releasing toxins (such as tannins and lectins) throughout their bodies. Most animals, on the other hand, have evolved “fight-or-flight” capacities and thus, if you catch them successfully, seem safer to eat because their tissues probably contain fewer poisons than plant cells do.

Nora also embraces a meta-rule formation for individualized health. This is the process of making our own rules to guide our choices, such as “Don't consume anything that causes a negative physiological reaction,” reminding us to *listen to our own body* every step of the way as we deduce for ourselves, what works and what doesn't work in our patient-of-one case. And we must always remember a potent psychological concept that my astute friend Professor Aaron Blaisdell, of the University of California, Los Angeles, introduced me to called “overshadowing” (hat tip to Pavlov) which occurs when the initial stimulus is so strong that it blocks the perception of a second, downstream effect. For example, when people drink a soda, the initial stimulus from the sugar is so great that it overshadows the energy crash and feelings of poor health that follow shortly after consumption. In this way, overshadowing inhibits people from responding appropriately to the poison they ingest and inhibits their ability to learn via conditioning degrade as a result. Nora hopes to shed light on this type of overshadowing to help people really listen to their body in ways they never did before.

Nora's ray of light starts all the way back in the Ice Age, and then she works her way forward to the present, searching our ancestry for hypotheses about our physiology. From these inquiries, Nora discusses Pottenger's research because she's concerned about our future generations. In his studies Pottenger witnessed the degradation of health in successive generations when his cats were fed improper (processed and sugary) diets. Since the Industrial Revolution, it seems, as people have consumed more and more nonreal, processed foods, human beings have experienced a degradation of health and a concurrent rise in *diseases of civilization* that parallel the problems Pottenger observed in his research. Nora hopes that we are not too many generations into our modern metabolic syndrome woes, because Pottenger's experiments also showed that it takes a few generations of proper nutrition

to restore animals to vibrant health.

Given our current health care and medical predicaments, what does Nora suggest? Well, within the “eat real foods” domain, she gracefully nudges folks toward good lipids from pastured meats, fish, butter, yogurt, coconuts, avocados, and a few other key sources; moderate, quality protein, primarily from animal sources and some nuts; and low-carbohydrate intake, mainly from nonstarchy vegetables and some fruit (seasonally). That’s a starting glimpse of her well-developed and thoughtful human diet discussion; I’ll leave the rest for you to peruse in her book.

Nora also feels that the destruction of our soil and the changes in the types and quality of our food today suggest that supplementation may be necessary to achieve optimal health. Personally, I think this hypothesis is one worth heeding.

She even features a chapter on exercise and movement that emphasizes the value of high-intensity, low-duration activities like sprinting and occasional lifting, coupled with plenty of rest and relaxation (sleeping) and low-intensity energy expenditure (walking outdoors) in between. The *spirit* of her approach to fitness and training, as I see it, is essentially a bricolage of what my friends Mark Sisson, Keith Norris, Robb Wolf, Art DeVany, Frank Forencich, and Erwan LeCorre have to say.

At the end of the day, Nora shares a kindred spirit with the rest of the ancestral health^{*3} community that has emerged recently (her book features notable quotes from Loren Cordain, S. Boyd Eaton, et al.), and she is playing an empowering leadership role in the movement.

So, take Nora’s book as a field guide, as a map for your own evaluation and self-experimentation. Hopefully, you’ll stumble upon your own personal protocol along the way.

Get ready, it’s *Primal Body, Primal Mind* time!

To good health.

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References

- Bland, J. 1998. Foreword to *Biochemical Individuality: The Key to Understanding What Shapes Your Health*, by Roger J. Williams. New Canaan, Conn.: Keats Publishing.
- Candela, M., et al. 2010. “Functional Intestinal Microbiome: New Frontiers in Prebiotic Design.” *International Journal of Food Microbiology* 140, no. 2–3: 93–101.
- Hamilton, J. April 7, 2010. “How Gut Bacteria Evolved to Feast on Sushi.” National Public Radio. www.npr.org/templates/story/story.php?storyId=125675700.
- Peterson, J., et al.; NIH HMP Working Group. 2009. “The NIH Human Microbiome Project.” *Genome Research* 19, no. 12: 2317–23.
- Pollack, A. June 14, 2010. “Awaiting the Genome Payoff.” *New York Times*. www.nytimes.com/2010/06/15/business/15genome.html?_r=1&src=busln.
- Popper, K. 2002. *The Logic of Scientific Discovery*. London and New York: Routledge.

Qin, J., et al. 2010. "A Human Gut Microbial Gene Catalogue Established by Metagenomic Sequencing." *Nature* 464, no. 7285: 59–65.

Turnbaugh, P. J., et al. 2009. "The Effect of Diet on the Human Gut Micro-biome: A Metagenomic Analysis in Humanized Gnotobiotic Mice." *Science Translational Medicine* 1, no. 6: 6ra14.

Preface

As a clinical neurofeedback practitioner specializing in EEG biofeedback (also known as neurotherapy, neurobiofeedback, and brain training), I help individuals exercise or condition the brain in a way that allows for greater stability, enhanced cognitive functioning, and improved affect and ability to pay attention through what is largely a neurological modification of stress response. It is a means of impacting both the regulation and the functional dysregulation of a nervous system through a noninvasive and self-empowering process. Neurofeedback is best likened to highly specialized “brain exercise.” At its best, neurofeedback seems to restore a neurological flexibility, stress-coping capacity, and a certain improved homeostasis that should be everyone’s birthright. It can free one from self-imposed obstacles and allow the full flowering of human potential.

Using neurofeedback, I myself was freed from over thirty years of intractable depression that had not responded to *anything else*. The concomitant anxiety and panic attacks I experienced almost daily, too, became part of the past. It provided a freedom and a liberation that has made me a devoted practitioner of this miraculous form of brain training ever since. That was many years ago. The effect I have since witnessed in thousands of individuals has been so profound that I am convinced neurofeedback is the most powerful means available to facilitate permanent and positive changes in neurological functioning. It is the most rewarding work I can possibly imagine.

However, I have found individuals repeatedly plateauing in their process, simply hitting walls they couldn’t seem to hurdle. Some experience inexplicable backslides or have difficulty getting their brains to move at all. What such experience has revealed to me, over and over, is that typically there seems to be an issue with diet, food sensitivity, endocrine dysfunction, severe nutritional deficiencies, or a combination of conditions. Almost without exception, addressing these dietary issues allows the obstacles to be overcome, and healing improvements are then free to take place. Everything comes together far more efficiently. The brain and body simply have to have certain raw materials to work with in order to function properly. It is abundantly clear that all the brain training in the world (much less any other form of support or therapy) cannot create a nutrient where there is none or remove a problematic substance that does not belong.

My more than twenty-five years of background in the passionate, intricate study and application of nutritional science, and more recently, nutritional anthropology, served to beautifully cement and maintain my own neurotherapy results. Dietary intervention with clients has repeatedly provided a powerful solution to such dilemmas. Counseling my clients regarding diet, however, is something that proved to be time consuming and often overwhelming for all involved. As a believer in providing detailed education and not prescriptions, I found that there was simply too much information to convey and too little time to convey it. I was at a loss to recommend any single source of literature to provide answers to my clients, as no single source seemed adequate in its scope. I found myself spending untold time and money copying articles and pages from books and offering lengthy explanations. This arrangement was an enormous source of frustration for all involved.

As such, frustration became the mother of invention, and this book was born. In its infancy, this was little more than a five- or ten-page article, outlining basic principles and providing a few resources. With all the positive feedback, however, came more questions—lots of questions. I also realized that

much of what I was providing as information was at times controversial and not voiced in the form of the mainstream health-oriented mantras. I needed to provide more clear references and illustrate the solid foundations of the framework I was gradually building in writing. More and more information seemed important to add, either as a clarification or as a pertinent adjunct to the principles. The modest five or ten pages began to grow. Increasingly positive feedback and excellent clinical results ensued, and there were still more questions. Eventually the whole thing grew and evolved. This newly revised, substantially expanded, and updated volume is the result.

Today, I use this book, nutritional counseling, and nutritional therapy with both my neurofeedback clients and those interested solely in dietary help. The results have been overwhelmingly positive.

Many, many individuals have benefited profoundly from the information presented here. Tremendously positive and inspiring results have been reported. I have seen weight loss when it was needed, restored digestive health when nothing else worked, substantially improved blood chemistry reports, and total liberation from food cravings and eating disorders—even addictions. I have also seen liberation from antidepressants, psychostimulants, and other types of medications; enhanced energy levels; improvements in mental clarity and affect; improved sustainability of attention; reduced anxieties and instabilities; and freedom from unnecessary dependence on gimmicks, gurus, and supplements. People are even reporting big savings on their grocery bills!

Most rewarding of all, I have come to see others become students of health themselves, no longer relying on controlling, confusing, or contradictory advice from diet pundits and “dictocrats,” a term I borrow a creative term coined by Sally Fallon, president and founder of the Weston A. Price Foundation. Using sound, commonsense principles, not formulas, gives independence in the process of attaining wellness and makes better educated consumers of us all.

It’s been several years since I wrote the earlier versions of the manuscript for this book. So much new information and so many new clinical experiences, responses from readers,^{*4} and new realizations and scientific advances have driven me to present the information in a more expansive, comprehensive, better-illustrated, and more multidimensional way. This brand-new second edition has been updated and revised from the 2009 version and offers the reader clearer and more comprehensive information than ever before.

In addition, the birth of the Primal Body, Primal Mind website is an inspiration whose time has come (www.PrimalBody-PrimalMind.com). The field of nutritional science is now evolving exponentially and far faster than ever before. We live in exciting, if not perilous, times. The Primal Body, Primal Mind website is an up-to-date and evolving resource for ongoing, detailed, cutting-edge nutritional information and education. It is for all those seeking to expand their knowledge, radically improve their health, and maximize their mind’s performance to the fullest extent. Also, look for the newly created website for the Nutritional Underground (www.nutritional-underground.com). The Nutritional Underground is a collective website devoted to a multifaceted approach to health and wellbeing as outlined by the paradigm presented in these pages. Multiple contributors from many facets of health and wellness provide you with a “one-stop shop” for support, resources, and ongoing education. Think of it as a community resource.

Addressing diet from an evolutionary perspective has been of immeasurable value in my practice and seems to speak in a commonsense way to even the most hardened skeptics; this includes even avowed junk-food junkies and devout vegetarians or vegans. A respectfully conveyed approach combined with the hard science of basic human physiology, cuts through a lot. Newfound advances in the science of longevity research have added an entirely new dimension to these foundational concep-

and promise to radically transform even the healthiest person into a manifestation of even greater potential. The implications are truly staggering.

We are boldly venturing here into extremely exciting frontiers never before imagined!

My interest is not to prescribe or dictate anyone's dietary habits. The information presented speaks for itself. Ample quality reference material is provided throughout to allow for further exploration. What readers choose to do with the information contained here remains entirely up to them. It has been wisely stated that it is abjectly impossible to actually teach anyone anything. The best one can do is inspire others to learn.

May you find this book inspiring.

Introduction

Just what is it that genuinely constitutes a *healthy diet*?

Innumerable popular books, articles, and testimonials overwhelm and confound the average consumer in such a way as to render such a concept virtually meaningless. Misinformation driven by financial interests and emotional biases either sways the gullible to extremes or leads the skeptical-minded to cynicism. Either way, the truth is lost somewhere in the static and remains overwhelmingly clouded. It is my objective in writing this book to put forth an appeal to what can be readily defined by logic and sense, as well as to provide information that is sound and based on evolutionary, modern scientific and physiological perspectives. This book thinks outside the box of accepted dogma—away from corporate vested interests—and lays a clear foundation of *principles*, rather than *formulas*, that can serve as a guide. This is not just another “caveman” diet book or just another low-carb diet. Fasten your seat belt.

The optimal human diet is not something that should have to require overly careful formulation by calories or percentages, much less by blood type. A person should not need a calorie counter, a percentages guide, or any sort of manual in tow when going to the market to buy food. No one should need a blood test to determine blood type in order to know how to eat. Such tools, though they provide a seductive sense of structure and security, can be unnecessarily confusing and do not ultimately constitute a sound, principle-based, commonsense approach. Long term, these approaches tend to lack sustainability.

Fundamentally, as humans, we are much more alike physiologically than not. Although it’s true that we need to take into account something called *biochemical individuality*, the fact is that we are all subject to the same fundamental physiological laws. We all share a sophisticated endocrine system subject to certain interhormonal relationships; we all, of necessity, have a blood pH value ranging between 7.35 and 7.45; and we all have similar basic nutrient requirements. There are certain basic principles that apply to all of us that must be taken into account. To be fair, some of these truths are newly discovered and decidedly alter the landscape of dietary optimization. But there’s much more to it than this— much more.

So where do we begin?

All of the structure and functions of the human body are built from and run on nutrients. All of them.

JANET LANG, B.A., D.C.

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