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FOREWORD

Every so often, you encounter a gem among the dross competing for your attention. Such is the case with *Primal Body—Primal Mind*, written by Nora Gedgaudas.

This manuscript 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 eliminate a host of physiological and mental disorders and restore followers to the natural condition of health and wellness that results from eating as we were biologically designed.

Gedgaudas' manuscript is loaded with facts, numbers and startling revelations, but it is also replete with understandable explanations and solutions tied to everyday actions and changes that anyone can make. Even if you read it without any intention of changing your diet, *Primal Body—Primal Mind* is a non-fictional excursion into the realm of biology, politics and self-care that you will never get from formal academic education. It is worth reading as a short, comprehensible course in the biochemistry of behavior and of consumerism. Her approach to the Paleolithic dietary habits that have sustained humans without pills or potions for millennia stands in stark and clean defiance against the nonsense peddled for our allegiance and dollars so relentlessly.

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 Web sites and other resources. Her arguments and data are scientifically documented, and the manuscript is well organized and easily referenced.

Reading Gedgaudas' 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 our high quality of 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 Neurotherapy. As a neuropsychologist with thirty years of experience and the author of a popular book on brain training and mental fitness, I endorse Nora's exemplary use of scientific techniques, and her reputation and expertise in the clinical care of people. She is among the elite professionals who can restore health and promote growth by harnessing nature's principles with effective care.

I have learned a lot from Nora and from *Primal Body—Primal Mind*, and I believe that this is “must” reading for anyone serious about healthcare and self-care.

MARK STEINBERG, PHD
Licensed Psychologist
Clinical Neuropsychologist
NBC Medical Consultant
Author of *ADD: The 20-Hour Solution*

PREFACE

As a clinical neurofeedback practitioner specializing in EEG biofeedback (also known as neurotherapy, neuro-biofeedback, and brain training), I help individuals exercise or condition their brains in a way that allows for greater stability, enhanced cognitive functioning, and improved affect and ability to pay attention. It is a means of impacting both the regulation and functional dysregulation of a nervous system through a non-invasive 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 was a freedom and a liberation that has made me a devout 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 and/or severe nutritional deficiencies. 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 cannot create a nutrient where there is none or remove a problematic substance which 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 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 clarification or as pertinent adjunct to these 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 utilize this book, nutritional counseling and nutritional therapy with both my neurofeedback clients and with those solely interested 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; 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,” to borrow a creative term coined by Sally Fallon. Utilizing sound, common-sense

principles, not formulas, gives independence to the process of wellness and makes more educated consumers of us all.

It's been several years since I wrote the earlier versions of this book. So much new information, experience, feedback, and so many new realizations and scientific advances have driven me to completely rewrite it all and present the information in a more expansive, comprehensive, better-illustrated and more multi-dimensional way.

In addition, the birth of the Primal Body—Primal Mind Web site 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 web site is an up-to-date and evolving resource for ongoing detailed, cutting edge nutritional information and education. It is for anyone seeking to expand their knowledge, radically improve their health and maximize their mind and its performance to the fullest extent.

Addressing diet from an evolutionary perspective has been of immeasurable value in my practice and seems to speak in a common sense way to even the most hardened skeptic—this includes even avowed junk-food junkies and devout vegetarians or vegans. A respectfully conveyed, common-sense approach, combined with the hard science of basic human physiology, cuts through a lot. Newfound advances in the science of longevity research has added an entirely new dimension to these foundational concepts and promises to radically transform even the healthiest person into manifestations of even greater potential. The implications are truly staggering.

We are boldly venturing here into new and 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.

NORA T. GEDGAUDAS, CNS, CNT

Portland, Oregon

August, 2008

For more information relating to neurofeedback, see my web site at www.northwest-neurofeedback.com.

A LOOK AT WHERE OUR DIETARY REQUIREMENTS ORIGINATED

All humans require similar ranges of both macro and micronutrients and all human groups have similar anatomical, physiological and endocrine functions in regard to diet and nutrition. We were all hunter-gatherers dependent upon wild plants and animals, and these selective pressures shaped our present day nutritional requirements.

—LOREN CORDAIN, PHD, professor of exercise and sports science at Colorado State University and noted evolutionary diet researcher

99.99% of our genes were formed before the development of agriculture.

—DR. S. BOYD EATON, MD, Medical Anthropologist

As a species, we are essentially genetically identical with respect to genetic expression, regardless of blood type, to those humans living more than forty thousand years ago. Our physiologies are fundamentally Paleolithic, which refers to the human evolutionary time period spanning from roughly 2.6 million to about 10 thousand years ago—before the dawn of agriculture. We are the result of an optimal design, shaped and molded by nature over a hundred thousand or so generations. In other words, we are *all*—biologically, genetically and physiologically, without exception—hunter-gatherers. And for much of our hominid evolution, we have been mostly hunters.

The *hunter-gatherer diet* may be defined via at least two different perspectives: Ice-Age Paleolithic, and post-Ice Age, or neo-Paleolithic. The diet of post/neo-Paleolithic peoples, including modern-day hunter-gatherers with some regional variation, essentially consisted of high quality animal source protein, both cooked and uncooked (including organ meats of wild game, all clean) that is hormone-, antibiotic- and pesticide-free, naturally organic, and entirely range-fed with no genetic alterations; some eggs, when available; insects, sorry to say; and/or seafood.

This diet was typically moderately high in fat—which was highly coveted—estimated to have been at roughly ten times our modern intake. This included varieties of saturated forms, monounsaturated, omega-3, and balanced quantities of omega-6, together with abundant fat-soluble nutrients. Post-Ice Age primitive human diets, as well as diets during more temperate periods amidst the Ice Age, generally included a significant variety of vegetable matter, some fresh raw nuts and seeds, and some very limited quantities of tart, wild fruit, as was seasonally available.

There was far more plant material in the diets of our more recent ancestors than our more ancient hominid ancestors, due to different factors. We have spent 90–95% of the last 500,000 years locked in the grip of mostly ice and snow via the Ice Age, with only the briefest cool periods of reprieve, when edible plant life might have grown over a significant portion of this planet. Even while the Northern Hemisphere was gripped in snow and ice, Africa was being ripped apart by drought and wildfires. Studies of ancient human *coprolites*, or fossilized human feces dating anywhere from 300,000 to as recent as 50,000 years ago, have revealed essentially a complete lack of any plant material in the human diets of the subjects studied. In other words, it is likely we subsisted for a very significant portion of our evolution almost solely upon the meat and fat of animals we hunted. Fat was *the*

prime commodity for its concentrated nutrient and energy value. As omnivores and opportunists, we would have certainly procured whatever might have been available to us for food. Permafrost and drought, however, left limited options.

Another important limitation stems from the fact that we as a species have only relatively recently developed a universally controlled use of fire. By most accounts, this did not occur before 50,000 to 100,000 years ago. Although scattered evidence of fire exists from as far back as 300,000 to 400,000 years ago, it is unlikely that sophisticated development of cooking practices occurred much before the use of fire became more universal and commonplace—sometime after Cro-Magnon man migrated into Europe. (The oldest known pottery dates only as far back as 6800 BC, incidentally.)

What makes the use of cooking especially significant relates to the toxicity of most plant species. Wild plants contain any number of toxic compounds that would have made their use as food in any significant quantity perilous. Cooking is the only means by which many of these anti-nutrients can be neutralized. Modern produce has been genetically modified to reduce the presence of harmful compounds to a significant extent.

Most wild plants, on the other hand, require extremely careful selection and preparation. Most starchy roots, tubers and legumes would have been prohibitively dangerous to consume without extensive cooking. Furthermore, the energy expended in the procurement of remaining types of plant foods easily exceeds their potential caloric value, to say little of their meager, inferior available protein content so critical to our needs. Mass die-off of mega-fauna following the last Ice Age 10,000 years ago and over-hunting by humans probably lead to an increased dependence upon plant foods, and ultimately to the development of agriculture. Nonetheless, it is widely postulated that it was, in fact, our extended dependence on the meat and fat of animals

(rich in eicosapentaenoic acid, or EPA; and docosahexaenoic acid, or DHA) through these frozen winters of unimaginable duration that allowed for the rapid enlargement and development of the human brain.

Our increased dependence on hunting also likely helped facilitate and develop the very qualities human qualities that we most intrinsically value—cunning, cooperation, altruism, sharing, advanced creativity, the power to foresee, to be able call upon the past in terms of the future, the capacity to evaluate with complexity, to imagine solutions—qualities not particularly found in other primates. Also, interestingly, the dominant form of fatty acids in the human brain is omega-3; in chimps and other primates, it is mostly omega-6—a very significant distinction, and one that is the likely result of these Ice Age dietary changes.

Many authors popularizing the notion of Paleolithic diets base their conclusive evidence on the diets of more contemporary primitive peoples, forgetting that for most of our evolution, the world has been a very, very different place. Either way, it is evident from even the most recent analysis of primitive diets that animal-source foods and fat-soluble nutrients invariably play a critical, central role in extraordinary physical and mental health and freedom from disease. It is also quite evident that diets consisting of any significant quantity of carbohydrates are a strictly modern phenomenon, one that our Ice Age human physiology has evolved little adaptation to, or defense against.

Carbohydrates, other than the largely indigestible variety found in fibrous vegetables and greens, have generally played a minimal role at best through most of human evolution. Fruit was only consumed seasonally by our post-Ice Age ancestors in most places; wild fruit is extremely fibrous and isn't that sweet. Many potatoes and tubers would have required extensive cooking to neutralize extremely toxic

alkaloids. Wild varieties that would have been available to us through most of our history as a species can be especially toxic.

In other words, it isn't likely we were eating baked potatoes with our woolly mammoth steaks—or much starch at all.

In fact, of all the macro-nutrients (that is, protein, fats and carbohydrates), the only one for which there is *no* actual human dietary requirement is carbohydrates. This is a critical and very fundamental point to remember.

Our bodies can manufacture glucose, as needed, from a combination of protein and fat in the diet. As a matter of fact, glucose is really only needed for fueling our red blood cells. Most tissues in the body, including the brain, actually prefer, if we let them, to use *ketones*, the energy-producing by-product from the metabolism of fats. This fact is very overlooked by the majority of medical and nutritional experts. There is abundant evidence that many modern disease processes, including cardiovascular disease, elevated triglycerides, obesity, hypertension, diabetes, hypoglycemia and cancer, to name a few, are the product *not* of excess natural fat in the diet, but of excess carbohydrates. Other contributing factors certainly include ultra-prevalent unnatural trans fats, rancid fats, unnaturally high quantities of dietary omega-6 fatty acids from vegetable oils, heavy metals and other pollutants, artificial chemicals and additives and widespread use of xenoestrogens, the artificial estrogen-like compounds used in pesticides, plastics and many other common household items and cleaning supplies.

Current marketing ploys and diet dictocrats unrelentingly cling to other notions, in spite of overwhelming and well-documented evidence to the contrary. More modern ills can be traced to chronic carbohydrate consumption than any other single factor. Trans fats might come in at a close second.