

INTRODUCTION



**What Is Going
On Here?**

Conventional Wisdom vs. The Primal Blueprint

In the *Primal Blueprint* (PB), we will challenge and reframe these major elements of Conventional Wisdom (CW). Consider these alternatives with an open mind; we will discuss each in detail throughout the text.

Grains – wheat, rice, corn, bread, cereal, pasta, etc.

CW: “Staff of Life” – foundation of healthy diet. 6-11 daily servings recommended by US Government and numerous other experts. Provides main source of energy for working muscles. Choose whole grains for more nutritional value, and extra fiber.



PB: “Worst mistake in the history of the human race” (UCLA evolutionary biologist Jared Diamond). Drives excess insulin production, fat storage, and heart disease. Allergenic, immune-suppressing, nutritional value inferior to plants and animals. Whole grains possibly worse due to offensive pro-inflammatory, immune and digestive system disturbing agents – especially excessive fiber.



Saturated Animal Fat

CW: Limit intake. Heart disease risk factor. “Eating fat makes you fat.” Replace saturated fats (meat, lard, dairy) with PUFA’s (polyunsaturated fatty acids) like vegetable oils.



PB: Little or no association with heart disease risk. (Framingham and Nurses Health studies). Should be major dietary calorie source (from animal foods). Drove human evolution/advancement of brain function for two million years. Promotes efficient fat metabolism, weight control and stable energy levels. Major risk factor for heart disease is actually Metabolic Syndrome, driven by excess PUFA’s/insufficient Omega-3’s, high carbs/excess insulin and overly stressful lifestyle.



Cholesterol

CW: Strictly limit intake. Elevated levels = elevated heart disease risk. Take statin drugs and eliminate animal foods (especially eggs) if total is 200 or over. Consider pre-emptive statin therapy if family history of heart disease.



PB: Essential metabolic nutrient, little or no relevance to heart disease risk (Framingham and Nurses Health Studies). Only dangerous when oxidation and inflammation occur (from poor diet and exercise habits). Statins can have disastrous side effects and minimal, if any, direct benefit.



Eggs

CW: Minimize consumption due to high cholesterol content. Choose just egg whites as high protein alternative.



PB: Zero correlation with heart disease or cholesterol levels. Yolk extremely nutritious, whites minimally so. Enjoy in abundance.



Fiber

CW: Important dietary goal, derive mostly from grains. Improves gastrointestinal function, lowers cholesterol, speeds elimination, helps control weight by minimizing caloric intake.



PB: Incidental fiber from vegetables and fruit is optimum. Excess fiber (from grain-based diet) contributes to nutrient deficiency by inhibiting nutrient absorption. Also hampers gastrointestinal function and elimination.



Meal Habits

CW: Three squares (or six small meals) daily to "keep flame burning". Skipped meals = slowed metabolism, lower energy levels, sugar cravings and future binging risk.



PB: Eating frequency is a personal preference, but *it's all about insulin*: control production and even sporadic eating habits will sustain energy without regular meals (it's in our genes!). Intermittent Fasting is a great catalyst for weight loss.



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Cardio Workouts

CW: Centerpiece of fitness program. Promotes cardiovascular health and weight control, minimizes heart disease and cancer risk. Minimum 30 minutes, three times per week (but more is better) of sustained efforts in medium to difficult intensity zones (happens by default - keeping up with class/group or trying to jog instead of walk).



PB: Frequent medium to difficult sustained efforts (aka "Chronic Cardio") = over-stress, fatigue, burnout, injury, accelerated aging, and increased disease risk. Ineffective for weight loss: calories burned through Chronic Cardio simply increase appetite, particularly for sugar. Slow down for better health and peak performance!



Strength Training

CW: Focus on form and deliberate work/return rhythm. Lift to failure in sequence through numerous stations (takes about an hour for a complete workout), including isolating body parts to get desired size, toning and "cuts".



PB: Emphasize explosive movements over deliberate pace. Conduct full body, functional exercises to develop *Primal Fitness* (broad athletic competence with optimal strength-to-weight ratio). Finish most sessions in 30 minutes or less. Occasional "Primal" max efforts (including sprints) promote optimal gene expression, hormone flow and organ function = delay of aging process.



Weight Loss

CW: Achieve with high complex carb/low fat diet, regimented meals, portion control and Chronic Cardio exercise program. Severe calorie restriction coupled with overly stressful exercise effective for those “fit into the dress by June” emergencies. Bottom Line: It’s all about “calories in, calories out”...and lucky genes!



PB: Driven by high fat/moderate protein/low carb diet, intuitive, sporadic meals, and exercise and Primal Exercise Laws. Don’t worry about portion control, regimented meals, fanatical exercise or even family genetic predisposition. Calorie restriction with extreme exercise leads inexorably to long-term failure. Bottom line: *It’s all about insulin* to enjoy effortless lifelong weight control.



Play

CW: Ah, brings back fond memories of childhood. Who has time these days?



PB: Outdoor, active, unstructured fun is an integral component of overall health and balanced lifestyle, and scientifically proven to increase work productivity.



Sunlight

CW: Avoid the sun to prevent skin cancer! Lather up with SPF 20, 30, 40, 50 – all you got!



PB: Get adequate sun to avoid skin (and other) cancers! Vitamin D synthesis promotes healthy cellular function. Cover up with clothing, find shade or go inside after sufficient daily exposure is achieved.



continued

Prescription Drugs

CW: Relieve pain, speed healing, prevent/cure disease, and address genetic frailties. Everyday use can enhance quality of life (Viagra, etc.).



PB: Mask/exacerbate underlying causes, compromise homeostasis and thus health, and produce disastrous side-effects. Simple lifestyle changes can replace vast majority of pills. Wonderful in case of emergencies only!



Footwear

CW: Sturdy, cushioned shoes minimize injury, improve comfort. Custom orthotics can provide additional support and protection.



PB: Get Primal - go barefoot! Perpetual use of "big" shoes weaken feet, increase injury risk and increase pain throughout lower extremities.



Goals

CW: Be specific and measurable. Helps you stay motivated and focused. "Consistency is key". Missed workouts = guilt, weight gain, and lost fitness.



PB: De-emphasize specific, results-oriented goals (potential to discourage – a la weight loss failure or "post-marathon blues"). Stay motivated by focusing on fun, and release attachment to outcome. Consistency = over-stress. Vary routine to minimize stress and improve adaptive response by genes. Missed workouts drive recovery, improvement and freshness.



Americans will always do the right thing—after they've exhausted all the alternatives.

—Winston Churchill

I'm going to ask you to forget most everything you thought you knew about diet, exercise, and health. There is a distressing amount of *flawed Conventional Wisdom* that confuses, misleads, manipulates, and complicates even the most devoted efforts to do the right thing: eat healthfully, exercise effectively, control weight, and avoid today's incredibly common health conditions like obesity, arthritis, indigestion, insomnia, diabetes, heart disease, and cancer.

In the *Primal Blueprint*, you will learn why eating a low-fat diet rich in grains like wheat, rice, bread, pasta, and cereal can easily make you fat and malnourished. You'll learn why millions of joggers and gym-goers put in the time and effort to lose weight yet routinely compromise their health and accelerate the aging process as a direct result of their devotion to fitness. You'll learn why cholesterol level and saturated fat intake are *not* the major risk factors for heart disease that we have been led to believe and why a relatively high-fat diet promotes health and longevity. I'll show how weight loss does not have to involve the suffering, sacrifice, and deprivation we've been conditioned to accept but instead is a matter of eating the right foods (plants and animals), avoiding the wrong foods (processed carbs—including grains—and trans and partially hydrogenated fats), and exercising strategically, for far fewer hours than you might assume, to reach your desired fitness goals.

All the answers are found in a set of 10 simple, logical diet, exercise, and lifestyle behaviors that I call the *Primal Blueprint*. Modeling your 21st-century life after our primal hunter-gatherer ancestors will help you greatly reduce or eliminate almost all of the disease risk factors that you may falsely blame on genes you inherited from your parents. Unfortunately, too many of us narrowly define genes as largely unalterable inherited traits—height, body type, eye color, physical or intellectual abilities, and “family history” health conditions and diseases. While some genes are indeed responsible for traits that are largely unaffected by lifestyle, many more play a bigger role in your health than you might realize. As coming chapters explain in detail, your genes—guided by what you eat, how you move, and even how you think—are the traffic cops that direct the functioning of every single cell in your body, every moment of every day.

Whatever you throw at them, your genes are going to respond in an effort to promote survival and, beyond that, homeostasis (the balanced and synchronistic

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functioning of all systems in the body). After all, this is the essence of human evolution. From a philosophical perspective, the *Primal Blueprint* does not presume to declare a right versus wrong way to live your life. Your body will still valiantly pursue homeostasis and survival when you sit on the couch downing Cheetos and Dr. Pepper. I am merely presenting the steps you can take to reprogram your genes to trigger *desirable gene expression* and achieve—as the cover suggests—“effortless weight loss, vibrant health, and boundless energy.” By following the *Primal Blueprint* laws, you can be the best that your genes allow you to be. What better definition of *vibrant health* is there?

The idea that we can reprogram our genes through lifestyle behavior constitutes the central premise of this book. It also represents a clear departure from today’s fatalistic Conventional Wisdom, which suggests that our genes, for better or worse, determine our destiny and that we have little say in the matter...unless prescription drugs or the Human Genome Project can come to the rescue. True, you might have a genetic tendency toward accumulating excess body fat or a family history of type 2 diabetes, but you’ll be more likely to see these traits expressed when you make poor lifestyle choices and send the wrong signals to your genes. Instead of falling victim to your genetic vulnerabilities, you can control how your genes express themselves in constantly rebuilding, repairing, and renewing your cells. Briefly, here are the most critical, life-altering elements of the *Primal Blueprint*:

Ramp Up Your Fat Metabolism by eliminating processed carbohydrates from your diet to minimize your body’s insulin production. This means eliminating not only sugars and sweets but grain products, including wheat, rice, pasta, and corn (yep, corn is a grain, not a vegetable). A diet that emphasizes meat, fish, fowl, nuts, seeds, and colorful natural carbs, such as vegetables and fruits, is the primary way to improve your general health, control your weight, and minimize risk of heart disease, cancer, diabetes, arthritis, and other diet-influenced medical conditions. If you are carrying excess body fat, it will disappear virtually effortlessly when you focus on eating the delicious, filling, nutritious foods that have sustained humans throughout the course of evolution for two million years.

Optimize Your Exercise Program by engaging in a genetically desirable blend of frequent, low-intensity energizing movement (walking, hiking, easy cardio), regular short, intense strength-training sessions, and occasional all-out sprints that help improve body composition and delay the aging process. This strategy is far superior to the Conventional Wisdom approach of following a consistent schedule of frequent medium-to-high-intensity sustained workouts, such as jogging, running, or cycling; cardio machines; or group classes. That workout plan—which I refer to derisively as *Chronic*

Cardio—places excessive and prolonged physical stress on your body, which inevitably leads to fatigue, injuries, compromised immune function, and burnout. Sometimes, less really is more.

Manage Stress Levels with plenty of sleep, play, sunlight, fresh air, and creative outlets and by avoiding trauma that often arises from stupid mistakes. Rebel against the tremendous cultural momentum toward sedentary lifestyles, excessive digital stimulation, and insufficient rest. Honor your primal genes by slowing down and simplifying your life. Your ancestors worked hard to survive, but their regular respites from stress gave them the peace of mind and body that are so highly coveted today.

Is Dying of Old Age Getting Old?

As you will soon discover, our genes were not only designed through evolution to keep us healthy, but they desperately *want* us to be healthy. Today, with the hectic pace of the high-tech modern world, we struggle with how to do the right thing by our genes. The ensuing failure creates a level of frustration and confusion that causes many of us, whether overtly or deep down inside, simply to give up. Experience teaches us how difficult it is, if not impossible, to be lean, fit, energetic, and healthy following Conventional Wisdom. Instead, we succumb to the forces of consumerism designed to placate our pain with silly shortcuts, comforts, conveniences, and indulgences. Consequently, the popular “Hey man, life is short!” rationalization becomes a self-fulfilling prophecy.

The consequences of eating processed foods, exercising excessively (or, conversely, being inactive), and making poor lifestyle decisions work in concert against our genetic mandate for health. At the very least, we can experience excess body fat storage, subpar fitness results, aching joints, gastrointestinal problems, frequent minor illnesses, sugar cravings, energy level swings, and recurring fatigue. Sounds bad enough as it is, but continuing to mismanage your genes with bad choices over years and decades will likely result in obesity, diabetes, heart disease, cancer, and/or the vast majority of degenerative conditions requiring a doctor’s care or medication. A huge percentage of all doctor visits today are a direct consequence of lifestyle choices that are misaligned with the environmental and survival conditions that shaped our primal genetic makeup.

These consequences are painfully obvious to most everyone, and our collective interest in doing the right thing has driven a booming fitness industry, incredible advancements in medicine, much greater awareness of healthy foods and lifestyle choices, sharp declines in smoking, and sharp increases in restaurants offering salad bars and smoothies. Ironically though, the collective health of America—and other Western countries that have adopted our fast-paced culture—is worse than ever. A study released in 2008 by Johns Hopkins University suggests that by the year 2030, 86 percent of all

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adults in the United States will be overweight or obese (up from the current estimate of 65 percent); what’s more, a National Institutes of Health conference report stated that “our trends predict that *all* Americans will be obese by 2230!”

We reluctantly accept as fact that the normal human life span consists of growing up to reach a physical peak in your early 20s, followed by an inevitable steady decline caused by the aging process. Under this faulty assumption, we allow ourselves to gain an average of one and a half pounds of fat per year starting at age 25 and continuing through age 55¹ (we also lose

half a pound of muscle per year, resulting in adding a pound a year in the wrong places as we age). Our last decade or two (until we reach the average life span of about 78 years)² is usually characterized by inactivity, excess body fat, assorted medical conditions, and a host of prescription drugs to alleviate the pain and symptoms of chronic disease. Twenty-seven percent of us will die from cardiovascular disease, and another 23 percent will die from cancer.³

I know that 100 percent of us will die from something, but personally, I’d prefer dying from old age. Physician and author Dr. Deepak Chopra estimates that perhaps only 1 percent of us will check this box when we check out and further asserts that organs and tissues have the ability to last 115 to 130 years before they fail due to aging. Of the one trillion dollars America spends annually on health care, the Centers for Disease Control and Prevention (CDC) estimates that 70 percent of that is spent on lifestyle-related chronic diseases, such as obesity, diabetes, and heart disease. A surprising number of people accept all this as a normal part of life, believing that some of us are just fortunate to have “good genes” and the rest must cross their fingers against bad luck.

Sure, millions of modern citizens contributing to these woeful statistics are completely disconnected from what’s required to be healthy. It might be hard for you even to relate to this segment of humanity that hasn’t a clue. However, even the most health conscious among us often struggle. Despite a sincere commitment to do the right thing by Conventional Wisdom, we have experienced widespread failure to lose that last 5, 10, or 50 pounds. Injuries, fatigue, and burnout plague exercisers ranging from weekend warriors to professionals. We reflexively turn to prescription drugs to treat symptoms of distress, even though most conditions are minor and easily corrected by simple dietary and lifestyle changes. In the process, we interfere with normal gene-driven metabolic processes and thwart our innate ability to heal naturally—paving the way to one day join the masses on the wrong side of the stats.

The story is sad, but the good news is that your destiny for the most part is in your hands. By the time you complete this book, you will understand the big picture and all the necessary details of how to eat, exercise, and live in order to reprogram many of your genes to favor optimal gene expression. In the process, you will take control of your own body and your own life. This is really the only sensible way to counter the tremendous momentum pushing us away from health, balance, and well-being in our hectic modern world.

Be Like Mike—Your Genes Don't Have To Be Your Destiny

If I pop off at this point in the journey and say something like, "It follows that a condition like arthritis is mainly caused by bad diet and insufficient exercise," I might get a predictable comeback like, "Actually, Mark, rheumatoid arthritis runs in my family. My mother and grandmother both suffered from it." This type of family lore passed through the generations does have a measure of truth to it—you may indeed be predisposed to arthritis, breast cancer, or other conditions that have strong genetic influences. However, it is more likely that some of your lifestyle choices (perhaps learned from your parents) have programmed your genes to respond in unfavorable ways, rather than some unseen hand of fate slapping you simply because you "chose your parents" unwisely.

We now know that you have far more influence on how your genes shape and mold you than anyone believed possible as recently as a decade ago. Accepting this reality might just turn a potential genetic nightmare into the best thing that ever happened to you. A heightened awareness of elevated genetic risk for heart disease, diabetes, or cancer has inspired many to take an alternate route and forever avoid these undesirable "fates."

Researchers from the Max Planck Institute of Evolutionary Biology in Germany studied height variations among different hunter-gatherer cultures and discovered that body size can be related directly to population density; those living in large settlements are smaller than those living in wide open tundra, savanna, or desert regions. Combine this finding with the extensive research confirming that differences in nutrition can influence height, and it's clear that lifestyle factors can significantly affect things that we generally believe to be hard wired. Evidence from identical twins raised apart with disparate lifestyle practices, and enjoying consequently varied levels of health, casts further doubt on the "genetic destiny" school of thought. A recent intensive study of identical twins concluded that poor diet and lack of exercise were far greater predictors of which ones would get diabetes than was heredity.

Experts in quantum physics and epigenetics are going even further, taking the buzz phrase "mind-body connection" out of woo woo land and into mainstream science. Dr. Bruce Lipton, Ph.D., a cell biologist, a medical school professor, and author of the acclaimed *The Biology of Belief*, leads a burgeoning field of scientific study (coined "new

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biology”) asserting that our DNA is controlled by signals from outside our cells, “including the energetic messages emanating from our thoughts.”

Certainly, depression is known to suppress immune function via hormones arising from negative thoughts. Is it preposterous to consider a basketball player growing to six feet six inches (even though his two brothers and father did not reach six feet), simply because he spent so much time and energy focused on being a basketball player—and needing to be tall—that he essentially willed himself to grow? Lipton would argue that it’s not only possible, but that comparable things happen, in one form or another, to each of us. Basketball legend Michael Jordan might also be amused with the question, because these facts are from his family. After being famously cut from his high school varsity team as a sophomore, he sprouted four inches in a single summer!

Surely you can relate to people who, without a second thought, blame a life of health problems and excess weight on genes. And surely we can all reference people with happy, positive dispositions who in turn seem to have more energy, less illness, and better health than average. Lipton declares, “It has been statistically established that one third of all medical healings (including surgery) are derived from the placebo effect as opposed to intervention....We have all been endowed with an innate healing ability that has been with us since the evolution of our species....”

“*Genes (good or bad) +
bad attitude +
bad lifestyle behaviors
= bad news.*

*Genes (good or bad) +
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= good news.*

*Your genes don’t have to
be your destiny!*”

Chapter Endnotes

¹ *Physiology of Sport and Exercise*, by Dr. David Costill and Jack Wilmore.

² The Central Intelligence Agency’s World Factbook reports that the 2008 U.S. overall life expectancy at birth is 78 (75 for males; 81 for females).

³ The 2008 American Heart Association “Heart Disease and Stroke Statistics,” available for download at americanheart.org, reported that in 2004, 869,000 deaths were attributed to heart disease and 550,000 to cancer. 2005 CDC stats indicate the percentage references, but recent headlines suggest cancer has surpassed heart disease as the number one killer. cdc.gov/nchs/data/nvsr/nvsr56/nvsr56_10.pdf