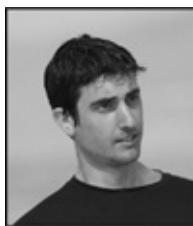


PENGUIN
CANADA

THE THRIVE DIET



BRENDAN BRAZIER is one of only a few professional athletes in the world whose diet is 100 percent plant based. He's a professional Ironman triathlete, bestselling author on performance nutrition, and the creator of an award-winning line of whole food nutritional products called Vega. He is also the 2003 and 2006 Canadian 50km Ultra Marathon Champion.

Nominated in 2006 for the Manning Innovation Award, Canada's most prestigious award for innovation, Brendan was shortlisted for the formulation of Vega.

In 2006, Brendan also was invited to address US Congress on Capitol Hill, where he spoke of the significant social and economic benefits that could be achieved by improving personal health through a better diet. The focus of his talk was to draw attention to the role that food plays in the prevention of the most chronic diseases currently plaguing North Americans.

Brendan has become a renowned speaker and sought-after presenter throughout North America, helping individuals and businesses thrive by sharing his dietary stress-busting program, the Thrive Diet.

Brendan lives in Vancouver, BC.

THE THRIVE DIET

the whole foods way
to losing weight, reducing stress,
and staying healthy for life

BRENDAN BRAZIER



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To Lynn, Seymour, and Stanley

Introduction

1 Reduce Stress to Increase Vitality

My Introduction to Stress

The Toll of Stress

Types of Stress

2 Understanding the Thrive Diet

High Net-Gain Nutrition Is the Key

Raw and Low-Temperature Cooked Foods

Alkaline-Forming Foods to pH Balance the Body

One-Step Nutrition

Nutrient-Dense Whole Foods Will Keep You Satisfied

Whole Foods for Complete Nourishment

Determining Common Food Sensitivities

Eliminating Biological Debt

Hydration

Lifestyle Tips to Complement the Thrive Diet

Applying the Thrive Diet

Recalibration: Ease into It

Getting Started on the Thrive Diet

3 The Thrive Diet for a Healthy Environment

The Energy Requirements of Food Production

Protein Production: A Significant Environmental Strain

Soil Quality

Why the Thrive Diet Is Less Demanding on the Environment

What Can We Do?

4 Exercise for Lifelong Health

Exercise: Getting Started

Proper Nutrition Boosts Exercise's Positive Effects

Nutrition Before Exercise

Nutrition During Exercise

Nutrition Immediately After Exercise

Alkalizing Foods and Exercise

Exercise-Specific Recipes

5 Staple Foods for the Thrive Diet

Vegetables

Legumes

Seeds

Pseudograins

Fruit

Oils

Nuts

Grains

Next-Level Foods

Additives

6 Meal Plans for the Thrive Diet

Shopping List

Appliances Needed

Traveling and the Thrive Diet

The Meal Plan

The Thrive Diet 12-Week Meal Plan

7 Recipes for the Thrive Diet

My Recipe Philosophy

Herbs

Soaking and Sprouting

Variations

Recipes

Thrive Diet Basics

Pancakes

Cereals

Smoothies

Energy Bars

Burgers

Pizzas

Vegetables

Soups

Salads

Salad Dressings

Crackers

Sauces, Dips, and Spreads

Drinks

Desserts

Appendix

Vitamins and Minerals

Carbohydrate, Fat, and Protein

Glossary

Resources

References

Recipe Index

Subject Index

introduction

The Thrive Diet grew out of necessity. At the age of 15, I decided that I wanted to become a professional athlete. My goal was to ultimately be a professional Ironman triathlete. Consisting of a 2.4-mile swim, 112-mile cycle, and a 26.2-mile run (a marathon), Ironman triathlon racing is not the easiest way to make a living. But it appealed to me. I enjoyed outdoor exercise, hard work, and challenge, so why not make a career out of it?

As you can imagine, I needed to dedicate a huge amount of time and effort to training for this event. As I got more serious about training and pursuing my goal, I searched for ways to improve my performance. Not wanting to reinvent the wheel, I looked at how other athletes were training.

What immediately stood out to me was how little their training programs varied. From the top performers in the sport right down to the average performers, the variations in their workout routines were only slight. Taking training out of the equation, then, what then allowed some athletes to improve at an exceptional rate, while others became stagnant or made only modest gains? What separated the top athletes from the average? As I found, there are only two prime components that make up an athlete's routine: training and recovery. Often referred to as stress and rest, both elements are of equal importance, yet usually only one gets attention—the training.

While training programs are meticulously plotted and each workout is planned in detail, little thought is given to recovery. We know that recovery occurs when the body is at rest, but, as I learned, there are varying states of rest that are not well understood. Maximizing the quality of rest is key. Removing other forms of stress from the body during times of rest will speed the rate of recovery. By doing so, the athlete will be better physiologically prepared for the next workout and therefore will benefit from it more. It was the recovery that needed to be my prime focus, not the training.

After reading many articles and speaking with a wide variety of top professional athletes in both strength and endurance, I found that the major variant among athletes was diet. They ranged from very poor to pretty good. So did their performance: The better the diet, the better the recovery rate. But what constituted a good diet? What were the best foods to eat for recovery and which ones should be avoided? Which foods helped the body function in a reduced state of stress so that it could recover faster?

My focus, which had begun on training, now shifted to recovery and, more specifically, diet. I tried many different diets, not restrictive ones, as is a common theme of many diets, but supposedly performance-enhancing ones. I tried high-carbohydrate, grain-based, low-fat, low-protein diets, and low-carbohydrate, high-fat, high-protein diets, and several others that fell in between. Although learning the basic principles of the various diets was helpful, I couldn't find any one diet that really gave me the edge I was looking for.

Then I tried a diet that was considered at the time to be a novelty. It was the earlier 1990s and diets that did not consist of meat and dairy products, regardless of their other parameters, were usually dismissed immediately, especially by athletes. But I tried this completely plant-based diet. After about two weeks, I began to think its critics were right—I felt terrible. General fatigue, local muscle soreness, low energy, constant hunger—I experienced it all. But why? What caused this to happen? Discouraged but also intrigued, I became an even stronger believer in the powerful effect nutrition has on performance.

on the body. If the pendulum could swing this far to one side, it must be able to swing the other way equally as far.

The resistance from others in the athletic community to a strictly plant-based diet also intrigued me. I was told by several trainers and coaches that I would need to make a decision: I could either eat a plant-based diet *or* I could be an athlete. Being a naturally curious person, I decided to find out for myself: Could I be a top-level athlete on a plant-based diet?

I turned to medical journals, applied dietary studies, and health and nutrition publications to learn more. I developed a good theoretical understanding of the subject, but would such a diet work in practice? It was at this point that I began to experiment, to make myself the test subject of a plant-based diet, with the goal being nothing short of optimal health and vitality.

Knowing that training is little more than breaking down muscle, I figured that what rebuilds the same muscle must be a major factor for recovery and therefore quicker improvement. If I was able to recover from each workout faster, I would be able to schedule them closer together and therefore train more than my competition. I would improve faster. As I suspected, food was the answer—high quality, nutrient-dense, alkaline-forming, easily digestible food in proper proportions (I learned the last part later). I experimented with a few self-created “performance diets” in an attempt to minimize recovery time between workouts. I began to use my body as a dietary barometer of sorts, based on the knowledge that the sooner I was ready to train again after a workout, the better my diet was. What made some foods speed recovery while others delayed it, sometimes significantly? Nutrition has a dramatic effect on recovery—that was unmistakable. Now I needed to determine what foods were best and why, and what their common denominators were. This would not be an easy task. As with endurance training itself, it could not be rushed. An in-depth experiment of this magnitude would need time. And I made time for it. I began 17 years ago.

Over the course of several years, I started to see a pattern—a series of common denominators began to emerge. The characteristics that rendered some foods highly valuable to the body while others registered as near worthless or actually stress-causing were beginning to present themselves. The former would become the basis for the Thrive Diet.

I then developed a series of test recipes and a week-long meal plan based on foods with the characteristics I found valuable. The result was astounding. Not only did my recovery time plummet but my energy level, strength-to-weight ratio, and endurance shot up. It was several years in the making, but here it was, the basis for the program. Applying the principles, I concocted a blend of a drink packed with nutrient-dense, plant-based whole foods, which I drank daily.

The year was now 1996 and I was 21. With this program intact, I started training more—because I could. I was recovering at an unprecedented rate. At this point, I realized that my goal of racing Ironman triathlon professionally *was* realistic. Just two years later, in 1998, I began my professional career. The speed at which my body was able to adapt to this type of all-encompassing training was my most impressive achievement. I attribute these exceptionally fast gains to the detailed attention paid to my diet.

Over the years, the core parameters of the diet have not changed, having withstood the test of time. That’s not to say that the diet has not evolved—it has. I’ve added new foods to the nutrition program once they have passed the recovery test and also been validated by published research.

What I realized next would become one of the most important implications of the diet. That the diet helped speed my recovery was great, but on a broader scale, there was so much more to be realized. Indeed, that recovery time between workouts could be significantly shorter was itself an indication of so much more. On the cellular level, this diet was able to speed the renewal of muscle tissue. That meant that following this diet would actually help the body regenerate more frequently, suggesting that it could help reduce biological age. (I discuss this aspect in detail in Chapter 2.) There was more thought

A major determinant of rate of recovery is stress level. The more stress placed on the body, the slower recovery will take place. When my external stress stayed at a constant level and the only variable was what I ate, it became clear to me that my plant-based diet helped reduce stress simply through better nutrition. This concept became the premise of the Thrive Diet. In Chapter 1, I expand on this by explaining the different forms of stress.

The implication that this diet could reduce stress was significant. Stress is now understood to be the root cause of many diseases and other health ailments. Obesity, fatigue, poor digestion, and trouble sleeping are often symptoms of stress. Since the average North American is plagued by stress of varying types, the stress-reducing premise of the Thrive Diet is the ideal solution for staying healthy in our modern-day world. This diet was no longer just for high-level athletes—it was suitable for all people, no matter their activity level: By helping reduce nutritional stress, and thereby overall stress, the Thrive Diet is beneficial for everyone. In fact, the Thrive Diet will potentially eliminate up to 40 percent of the total stress on the average North American's body.

I discuss nutritional stress in detail in Chapter 1, but, in short, *nutritional stress* is the term used to describe the body's stress response to food that is void of nutrition and/or foods that require a large amount of energy to digest and assimilate—refined, unnatural ones. Nutritional stress has the same damaging physiological effects as other kinds of stress. With modern-day demands and a diet based on refined foods, the average North American's body is under as much stress as that of a professional endurance athlete. Although the source of stress may be different, the need to curtail the negative effects is the same. Stress may be the cause of many health problems, but the good news is that we have control over what we eat and can prevent and reverse many health problems simply by eating a diet that alleviates nutritional stress. That is exactly what I developed the Thrive Diet to do—to get you healthy at the core.

The Thrive Diet aims to:

- reduce biological age,
- increase life expectancy,
- help reduce body fat and maintain lean muscle,
- increase energy without coffee or sugar,
- increase strength and endurance,
- improve productivity,
- improve mental clarity,
- improve sleep quality,
- reduce sleep requirements,
- improve resistance to infection,
- quicken recovery from exercise,
- reduce or eliminate sugar cravings,
- increase desire to excel.

In addition to the Thrive Diet's health benefits, it's easy on the environment. In Chapter 3 I explain how the diet is structured to use as few resources as possible, making it one of the most environmentally friendly diets possible. Environmental preservation translates into higher quality

food, which directly affects those who eat it.

In Chapter 4 I explain the value exercise has on regeneration and renewal. I cover what foods are optimal to fuel a workout and which ones are best to be eaten after exercise for quick recovery. Exercise-specific recipes that I've made for myself for years are included.

Chapter 5 is a list and description of the main foods in the diet, and Chapter 6 is a 12-week meal plan that will help you get started on the Thrive Diet. You may choose to follow the meal plan exactly, or simply use it as a general guideline. Along with soaking and sprouting instructions for seeds, nuts, and legumes, you'll find the recipes for the meal plan in Chapter 7. These include recipes for cereal, energy bars, smoothies, burgers, salads, dressings, and much more.

I have also provided an appendix detailing the vitamins, minerals, and other nutrients and food components involved in a healthy diet, as well as a glossary of terms I use often in the book. The Resources section at the back of the book lists companies that make high-quality base ingredients that you can use to make the Thrive Diet recipes.

With this book as your guide, you will be well on your way to reaping the rewards of higher quality living. By applying the principles of the Thrive Diet, you will create the fundamental foundation for health. No step is too small; each aspect of the diet that you embrace will directly translate into meaningful results. Start slow and build.

reduce stress to increase vitality

Stress is something that we are all familiar with—our modern world is a breeding ground for it. Yet many of us aren't aware of how expansive its reach can be and just how deeply it can affect every aspect of our life. Simply put, stress is anything that causes strain. Mental or physical, and regardless of origin, stress, with its far-reaching consequences, affects everyone in some way. The sources of stress in modern life are many; everything from pollutants in our drinking water and poor nutrition, to relationship concerns and job dissatisfaction, to overexercising or underexercising—all are stressors.

Stress is like fire: When controlled and used for a purpose, it serves us well. Left unbridled, it can consume us. In amounts that our body is capable of adapting to, certain stresses are beneficial. Exercise, for example, is a stress. Exercise and then rest, and your body will grow stronger. However, stress has become, now more than ever, a real threat to our health and livelihood, often overwhelming us and, in some cases, even controlling us.

Located on top of the kidneys, our two adrenals are small triangular glands that play a large role in the body's response to stress. During times of elevated stress, regardless of its source, the body's adrenal glands kick into action, secreting the hormone cortisol into the bloodstream. Cortisol is sometimes referred to as the "stress hormone" for the simple reason that its release is triggered by stress.

Because of the release of cortisol in reaction to the onset of stress, our body actually gains energy. We become more alert, our strength may increase, and we are able to process information more quickly and react slightly faster than usual. This is an innate defense mechanism. Drawing on its primal roots, our body assumes that if it is stressed, it must be in danger. By summoning its hormonal resources to temporarily improve strength and reaction time, the body will improve its odds of getting out of a prehistoric bind—early humans, for instance, would have had increased odds of survival when confronted by a predatory animal. Not enough nutrient-supplying food would have also been perceived as a stress to early humans and therefore a threat to survival. The threat would register, evoking the same hormonal response. Greater strength and more energy would have improved their ability to search for food.

The threats to early humans may have been more immediate threats than ours, yet our stress-response mechanism today remains much the same. In modern Western society, rarely is it put to its original use of self-preservation. Our daily threats pale in comparison to being attacked by an animal or having to scour long and hard for food. But although our threats may be less dire, they are greater in number—far greater—and cumulative. Since our primal response to dealing with threats is outdated, stress slowly eats away at us. In fact, our stress-response mechanism worsens the situation because of its *overreaction*. Wanting to protect us when we are confronted with stress—to get us out of even the slightest bind—our adrenal glands release cortisol to spring us into action. Our adrenal glands are taxed daily, even hourly.

Of course, the amount of cortisol released varies, based on the body's perception of the severity of the stressor. But reacting frequently or overreacting to an event as mundane as working overtime is

itself stressful, and as such, stress-producing. Cortisol will eventually “eat away” at the body by breaking down muscle tissue. And while cortisol stimulates us to deal with an apparent threat, regular stimulation brings about fatigue: Since our adrenal glands were not designed to be used as often as they are today, they become overworked, resulting in exhaustion. Adrenal burnout, as it is commonly referred to, is today a widespread problem.

Stressed people do not burn body fat as fuel as efficiently as do those who are not stressed.

Many, if not all, of our modern-day health problems are caused by stress. Obesity, fatigue, mental fog, sleep disturbances, digestive problems, prematurely wrinkled skin, depression ... the list goes on. If stress, and therefore cortisol, remains elevated, several problems arise to hamper our body's smooth functioning. One is that the body shifts fuel sources. Instead of burning fat as fuel, a stressed person's system will burn carbohydrate in the form of sugar, and the body begins to store the body fat instead of using it for energy. Stress-free people are fat-burning machines. Stressed people, on the other hand, burn and in turn crave carbohydrates. And cravings themselves are a form of psychological stress, as we discuss later in this chapter.

Stress can also cause hormonal imbalance. When cortisol levels change rapidly, the hormone's symbiotic relationship with other hormones is altered. Hormone imbalance may, for instance, affect electrolyte function, reducing the body's ability to stay adequately hydrated. This results in muscle cramping in the short term and, if neglected, wrinkled and less elastic skin. When the body has difficulty maintaining optimal fluid levels, the delivery of nutrients to its cells is compromised. This leads to a host of problems—basic malnutrition being the most obvious. Even if the diet is ideal, the nutrients are of little use if they don't get distributed. Hormone imbalance can also cause slower mental ability and impair the delivery of messages from the brain to other parts of the body, slowing movement.

Another health concern that regularly crops up as stress mounts is the inability to sleep soundly. We have all likely had difficulty falling asleep after a traumatic event, or perhaps even after taking on a new, uncertain project at work. As you probably suspected, high cortisol levels are again to blame. And lack of sleep further raises cortisol levels. It's a vicious circle: The body has an increased need for sleep at heightened times of stress yet is unable to get it.

my introduction to stress

I learned a lesson the first year I decided to compete in longer races. It was the spring of 1997. I gradually, but significantly, increased my training mileage, by about 10 percent per week. The first few weeks I didn't experience any problems; everything felt good. But as the months wore on and spring became summer, I found that as my rate of exercise increased, my quality of sleep decreased. This was strange. I had assumed that the more exercise I did, the more tired I would be and the better I would sleep. I continued training as usual. As the weeks passed, the quality of my training declined and I developed a greater appetite.

I was putting my body under a great deal of physical stress. As a result, my cortisol rose to a level that adversely affected my sleep quality. Cortisol levels, if elevated high enough, inhibit the body's ability to slip into the deep sleep state known as delta. It's in the delta phase that the body is best able to restore and regenerate itself. Taking longer to reach delta shortens the time spent in this phase if the total sleep time remains the same. Therefore, to achieve the same restored effect, the body needs to sleep longer.

To maintain the quality of my training sessions, I had to sleep almost an extra hour each night. ~~By doing so, I got my season back on track and was able to retain my desired level of training.~~ At the time, I didn't realize the cause and so treated the symptom, allowing myself to sleep longer. This method worked but, as I understood later, was far from optimal. Reducing the amount of training would also have treated the symptom, but that too was a far from optimal solution. At the time, my nutrition program was adequate but certainly not great. Some of the stress I was experiencing was certainly nutritionally based. Had I nourished my overworked adrenal glands with high-quality whole foods, my sleep quality would have improved enough to get me back on track.

An even more mysterious situation occurred the following year, my second of full-time Ironman training. I was putting in 8- to 10-hour training days, but despite performing 40 hours of exercise per week, I began to slowly accumulate body fat. Not much, about a pound per week, but it was noticeable, and the extra weight was decreasing my strength-to-weight ratio. How could this be? Was I simply eating too much, more than I could burn? Succumbing to this conventional way of thinking, I tried what most people do to lose fat: I cut back on the amount of food I ate. After a few weeks of consuming less, the situation was even worse: I gained fat faster, plus fatigue was now a real concern.

As it turned out, the cause of this fat accumulation was also the cause of the previous year's compromised sleeps: stress. In this case, physical stress—more than my body could deal with. Had I trained the optimal amount, an amount that my body could recover from, I would have remained lean. As I later learned, the amount of training I was doing stressed my body to the brink. The result was that my cortisol levels were chronically elevated for two months—long enough to gain noticeable body fat.

My adrenal glands were exhausted and my hormonal health sharply declined. Unaware of this, I had reduced my nutrient intake at a time when stress on my body was already extremely high, and this exacerbated the problem. Nutritional stress was now again also an issue. Had I eaten nutrient-rich whole foods instead of less food, I would have helped my body recover from the demands of training. In essence, I would have remained leaner by eating more.

My diet at the time consisted primarily of complex carbohydrates with a modest amount of protein and almost zero fat. A diet rich in essential fatty acids, like those found in whole flaxseed and hemp seeds, would have provided the extra fuel my body needed to function more efficiently, thereby reducing stress.

Stress, including not being adequately nourished, results in the accumulation of body fat.

As I found, even physical stress in the form of overexercising can cause fat to accumulate, so it's no wonder that stress from other sources is a catalyst for obesity. The body perceives not eating enough nutrient-rich foods as stressful. So, yes, there are situations when *eating more* will *reduce* your body fat percentage. The quality of your diet, however, is paramount. The Thrive Diet is based on nutrient-rich whole foods. Their nutritional stress-reduction properties will help you spend more time in the delta phase of sleep and help you achieve an ideal body weight. Eating only nutrient-rich foods will lead to permanent lower body fat.

If your goal is to lose body fat, ask yourself why it is that you have more body fat than you want. Are you overweight because you consume more calories than your body's activity level can utilize? If so, then a reduction in total calories consumed will help. However, if you are one of the many people who have tried a wide array of diets with only marginal success, it's time to get to the root of the problem. The guidelines in this book will help you minimize nutritional stress to optimize health. After that is accomplished, your body fat will decrease. That is, with the Thrive Diet, it is not

necessary to specifically target body fat.

the toll of stress

Initially manifesting as fatigue and weight gain, stress, if untreated, can lead to much more serious conditions. Now accepted as one of the leading causes of illness, stress has been shown to precipitate many diseases. The ability to weaken the immune system is one feat stress is renowned for, and compromised immune function leaves the body susceptible to sickness.

Have you ever noticed that when you work to meet a deadline—as the pressure mounts and stress rises—sickness is *least* likely to strike? Then, once you've met the deadline, you get sick. Or perhaps a day or two after a long, taxing race, illness sets in. The body is capable of rising to the occasion in a stressful environment; indeed, the more stress, the better the performance—short term. But when the project is finished and the stress is alleviated, the body *lets* itself get sick. We are equipped with a mechanism that is quite effective at warding off infection until we rest. It assumes that our immune system will be better able to deal with sickness when we are resting and relaxed than if we are in the midst of a pressing time, and it's right. From this, you might conclude that high stress all the time is the solution. Not so. The severity by which the immune system is suppressed is directly linked to the duration and intensity of the stress. Meaning, the longer the body is stressed, the greater is the potential for a big problem.

The body can tolerate only a certain amount of stress; there is a finite amount it can cope with. Strain beyond that point manifests itself in various ways. The first indications that the body is stressed beyond its ability to cope are relatively mild: fatigue, sleep disturbances, and mental fog. If stress overload is more severe, significant weight gain, intense food cravings, and depression become the telltale signs that stress has overwhelmed the system. If these symptoms are not dealt with, if they are allowed to become chronic, the chances of developing a disease such as type II diabetes, fibromyalgia, or even cancer greatly increase.

nutrition and cognitive ability

It continually surprises me how little credence many people place on nutrition's role in achieving and sustaining mental health. As I discuss in Chapter 2, the impact of high-quality food on the reconstruction of cellular tissue cannot be underestimated. The quality of this reconstruction is heavily dependent on the building blocks we make available—as with all other body parts, the brain is sustained and nourished by the food we eat. Constantly orchestrating countless calculations and assessments in just milliseconds, the brain is responsible for keeping us safe. It is in our best interest to keep it healthy.

Amino acids, found in unrefined protein, are our body's prime construction foods. Essential fatty acids are also vital for healthy brain construction and function. Glucose and fructose, two sugars found in fruit, are the brain's preferred source of fuel. I discuss all these nutrients later in the book.

Another important role nutrition plays in brain function involves our blood cells. Our blood cells serve several purposes, including distributing nutrients throughout the body and aiding digestion. Although many parts of the body require blood to function properly, blood is drawn to the part of the body where it is needed most. When we eat poorly digestible refined foods, extra blood is drawn to the stomach to help digestion. Because the blood is drawn away from parts that also require it, other bodily functions are slowed. You may have noticed after eating a large, heavy meal that your energy dwindles, that your body slows down. Try concentrating on something that requires considerable thought—it's difficult. The brain cannot get the blood it needs to function optimally. Not enough

blood in the head means not enough nutrients to the brain, and since red blood cells carry oxygen, heavy meal deprives the brain of oxygen as well. It's no wonder people have trouble concentrating after a big meal. In Spain, it is common to take a nap after lunch. Lunch is that country's heaviest meal of the day. The Spanish don't fight it; they know the body needs to work hard to digest, so they give themselves a break and allow themselves time to recharge. One of the benefits of eating whole, unrefined foods, like those featured in the Thrive Diet, are their low impact on the digestive system and other biological functions. Those who eat according to the Thrive Diet will have a greater ability to think clearly after consuming a meal.

cravings

One reason why people become overweight is because they eat too much of the unhealthy types of fat. Why do people crave fat? Fat helps numb the receptors in the brain that regulate emotional responses—that is, eating foods high in fat will help diminish certain unwanted feelings—at least in the short term. The best way to stop fat cravings is to eliminate the cause of the sadness, and that's easiest done once mental and physical well-being is achieved. The Thrive Diet meal plan will get you on your way.

Too much stress can result in depressed, low moods. In response, the ever resourceful brain attempts to self-medicate. Cravings are the first sign of this. To understand why our brain behaves this way, we again need to look to our primitive roots, to a time when forms of sugar could be found *only* in nutrient-rich fruit. Early humans craved sweet foods, just as we do, yet these cravings were satisfied exclusively by eating fruit. When stress goes up, so does our need for high-quality nutrition. Fruity foods provided it for early humans: The brain “assumed” that sweet meant nutrition in the form of fruit. However, most sweets that people eat today—in the form of refined carbohydrates and processed sugars—are nutritionally empty.

A sweet tooth also helps us maintain a positive outlook: The modern brain craves sugary or refined starchy foods (those foods whose fiber has been removed and therefore whose sugar component of the carbohydrate is relatively high) because they release serotonin, a chemical found in the brain's pituitary gland. The release of serotonin has a powerful elevating effect on our mood. Continually low levels of serotonin can lead to chronic fatigue and clinical depression. People who have a regular supply of serotonin being released into their bloodstream feel better, and are therefore more productive and feel less stressed, than those with low levels of serotonin. Serotonin is plentiful and free flowing when stress is low; however, as stress rises, serotonin production declines. Cravings for sugary or starchy food are most likely an attempt by the brain to make it “feel” better. This is why such foods are referred to as comfort foods—they are the foods that are craved after a particularly trying day. Ice cream and donuts, which are high in the sugar required to produce the subconscious desired serotonin hit, are common comfort foods. Giving in to these cravings will satisfy the brain, but this satisfaction is short-lived. And so you eat more serotonin-releasing foods, which eventually lead to more stress, since these refined carbohydrates offer very few nutrients—not having enough nutrients in our diet is a form of nutritional stress and therefore produces a stress response. Simply by having lower levels of cortisol (meaning less stress), the body will naturally produce more serotonin. Natural light and healthy food are the best ways to naturally raise serotonin.

Stress and in turn food cravings create mental clutter, decreasing the brain's ability to perform to its full potential.

When our thoughts are uncontrollably occupied by the perceived need for something, that is craving. Craving specific foods preoccupies the brain, making it less able to focus on anything else.

The mental clutter created by cravings causes the brain to be less functional. Some people even consider cravings mentally unhealthy. Albert Einstein was rumored to have worn the same clothes every day. His reasoning was simple: He didn't want to have to *think* about what to wear. Einstein knew that he needed his brain to focus on his ground-breaking work, not day-to-day living. It has also been reported that, for the same reason, Einstein purposely did not remember his phone number—just more mental clutter.

Having specific food cravings hampers ideas from flowing freely: If these cravings are constant part of our mental functioning, meaning the brain is focused on getting something at the chemical level, it makes sense that the likelihood of having ideas “just hit us” is reduced. It's like having a radio constantly on—even if it's at low volume, no matter how hard you try, you can't completely tune it out. If freeflowing thoughts cannot coexist with mental clutter, then new ideas, innovations, and ways to solve problems, generated by the subconscious, will not present themselves as readily as manifest as clearly. The path to an uncluttered mind begins with stress management, and diet is the number one consideration.

types of stress

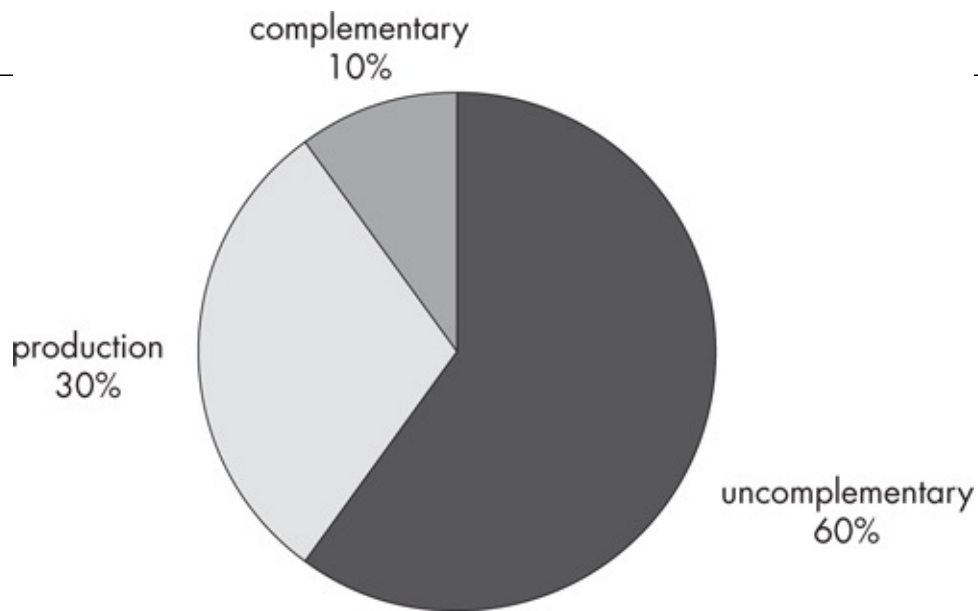
Many people complain of symptoms of stress, and some even consult a doctor or other practitioner about them. You may notice that your energy level is down, yet you are also having trouble sleeping, that your tolerance is lower—small things irritate you—and you're having trouble making even minor decisions. These are all typical signs of stress. Typically, the advice we receive is to not engage in as many stressful activities—“Don't work as much” or “Slow down and take more time for yourself.” Following such advice is one way to reduce stress. However, doing so also reduces productivity, which can actually *contribute* to stress: The last thing a high achiever wants to hear is that he or she should slow down.

It's easy to say, “Reduce the amount of stress in your life and you'll be healthier.” While this is generally a true statement, it's too broad. Instead, “select” your stressors; cultivate the beneficial ones and eliminate the unbeneficial. All stressors can be classified into one or more of three categories: uncomplementary, complementary, and production. It is possible to greatly reduce stress and its debilitating effects without reducing productivity; in fact, productivity will *improve* if the right stressors are removed. Energy improvement, ability to recover from exercise quickly, and a healthy body weight are just a few of the benefits of removing uncomplementary stress.

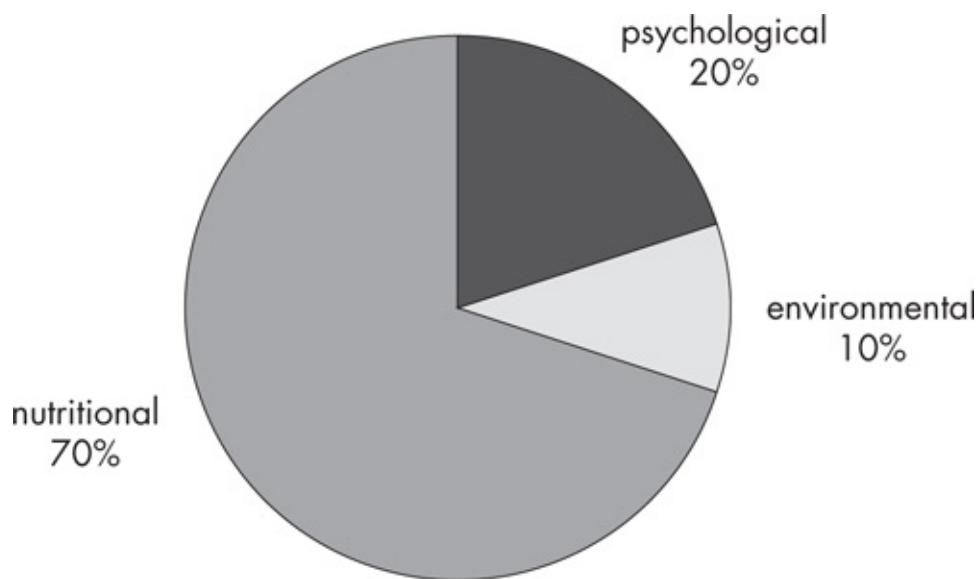
uncomplementary stress

Uncomplementary stress is the term I use to describe anxiety that produces no benefit. This type of stress should be eliminated or at least reduced as much as possible, since there is nothing to be gained by it. A chief goal of the Thrive Diet is to reduce uncomplementary stress.

Breakdown of Stressors



Common Sources of Uncomplementary Stress



It's estimated that as much as 60 percent of the average North American's total stress can be categorized as uncomplementary. That's a huge amount, particularly given this stress's debilitating effects, with no payoff to its host. Environmental stress accounts for roughly 10 percent of all uncomplementary stress. Air pollution, on the rise in urban areas especially, is a significant factor in environmental stress: We are breathing air laced with toxins. The abundance of internal combustion engines in vehicles poses the most immediate air-quality threat in urban centers. On a broader scale, inefficient food production and the transportation of this food is the biggest threat to air quality and environmental health as a whole. I discuss food production and the environment in detail in Chapter 1.

Psychological stress accounts for about 20 percent of total uncomplementary stress. This kind of stress is generally self-imposed, and some people are more prone to it than others. Worrying about future events that are in no way controllable, such as the weather, is a mild form of psychological stress. Setting unrealistic goals and then failing to meet them is a common cause of psychological stress. Feeling generally unfulfilled, dissatisfied, or criticized are yet other forms. It's been shown that those who regularly receive unconstructive criticism from a person they care for develop a weakened immune system because of their elevated stress. (Interestingly, criticism received from strangers or people who the recipient of the criticism does not like has little if any effect on immune function.)

Here's another example of psychological stress. A friend recently had the flu. He got sick, he said

from “being stressed and getting rundown.” Later he joked that he got the virus from his computer. In effect, that is what happened. His computer became contaminated with a virus, which erased the hard drive—and all his files. As you can imagine, my friend experienced psychological stress from the event. The stress weakened his immune system, and his body became vulnerable to infection—in this case, the flu. So, while the computer did not literally pass on its virus, it did have an effect on his immune system, paving the road for a biological viral attack.

Nutritional stress, for the average North American, is by far the greatest source of uncomplementary stress, accounting for approximately 70 percent of it. *Nutritional stress* is a relatively new term. It is simply defined as stress created by food because of its unhealthy properties. This definition is far-reaching, encompassing most food many of us consider staples. And while the definition is accurate, it is not complete—nutritional stress is much more than just unhealthy food. *Not eating the right foods can cause nutritional stress:* Not eating *enough* natural, unprocessed foods rich in vitamins, minerals, enzymes, high-quality protein, fiber, essential fatty acids, antioxidants, and good bacteria (probiotics) is a major source of stress on our bodies. Without these nutritional building blocks, the body lacks the components it needs to regenerate completely and effectively. The result is a weaker, less resilient body and, of course, more stress. The Appendix covers nutrients in detail. I explain why they matter and how you can ensure that your diet is rich in them. I also explain how the inclusion in your diet will dramatically reduce total stress.

The absence of healthy food in the diet is a form of stress.

Regular consumption of nutrient-dense whole foods supports cellular regeneration, which rebuilds new body tissue. This process is vital for every aspect of health and vitality. Nutrient-dense whole foods are those that have not been refined and stripped of their value during processing. Fresh fruits and vegetables, unrefined hemp, flaxseed, quinoa, sprouted nuts, seeds, certain seaweeds, algae, and some types of grains are all examples of such foods. The whole-food recipes in this book, along with the 12-Week Meal Plan (see page 167), will get you going on making whole foods part of your daily diet.

But let’s first get back to that common cause of nutritional stress, the overconsumption of refined food. Much of it is consumed in the form of fast food and convenience food—indeed, prepared meals that need only be warmed in the microwave have gained immensely in popularity as North Americans become increasingly busy. Refined, denatured, or fractionalized, these foods are not natural and are incomplete—parts have been removed during processing. White bread is a good example. White flour is made from wheat that has had the germ—the fiber- and mineral-dense part of the wheat—removed from the grain, leaving it nutritionally void. Unlike whole foods, refined foods offer little in the way of nutritional value; they are often simply empty calories. Usually high in refined carbohydrate and harmful types of fat, refined food has no place in the Thrive Diet.

The regular consumption of processed food has been linked to numerous cases of compromised health. The typical North American diet, for instance, has been linked to the development of food sensitivities and food allergies. It has also been shown that many allergies precipitate cravings, making “standard” foods harder to eliminate from the diet. Over time, these eating habits wear down the body’s endocrine system, the glandular system that secretes hormones into the bloodstream to regulate bodily functions, and, in turn, our organs’ ability to function efficiently. Nutrient deficiencies develop and premature signs of aging reveal themselves. General muscle stiffness and lethargy are sure to follow, and sickness is more likely. Often shrugged off as part of the aging process, symptoms such as these are *not* natural in a middle-aged person: They are a direct result of stress, most of it nutritional. The slowing rate at which the body regenerates at a cellular level is biological aging; the

speed at which *that* transpires, however, depends on diet. Combining the destructive nature of a largely refined-food diet with other common stressors and allowing these stressors to continue to the point at which they are chronic paves the way for many ailments—high blood pressure, blood sugar control problems, and elevated blood fats such as cholesterol among them. The immune system will become severely compromised, and this will likely lead to recurrent infections and serious conditions such as chronic fatigue syndrome or fibromyalgia.

In addition to its negative physical effects, uncomplementary stress has been shown to have a significant adverse effect on the psyche and motivation. Scientists now believe that will power is finite; its supply can become exhausted at the hands of excess stress, most notably uncomplementary stress. A person's desire to achieve is closely tied to stress level. That came as a surprise to me. I have always thought that motivation was simply a personality trait—that a person either did or didn't have drive. While personality is a factor, it now seems that there is more to it than that. Regardless of the desire to excel, if a person is forced to deal with mounting stress, that stress can cause motivation to flicker or extinguish altogether.

To use an analogy of a car, will power is burned like fuel. As gasoline is to the internal combustion engine, will power is to stress. Each time the car meets a headwind, it burns more fuel. The greater the resistance, the greater the fuel consumption. If a person is dissatisfied with her workplace—the hours, the lack of aptitude required, and the paycheck all become a source of discontentment. She will be required to “burn” will power to cope with her situation. Having to push herself to get through each workday, she will arrive home, her motivation exhausted. Even minor challenges will appear great. It's important to understand this. Many people believe that those who have trouble obtaining their goals are lazy or simply not motivated. Yet, it might well be that stress is extinguishing their drive; it is stress that is standing between them and their goals, not lack of ability or fortitude.

Uncomplementary stress depletes motivation, making even small challenges seem daunting.

I can't overemphasize the importance of enjoying your livelihood: You can't be discontent for the many hours of each day and expect to be healthy in other aspects of your life. Even if only subconsciously, your determination will be eroded and making changes, even those as simple as dietary ones, will be a challenge. The Thrive Diet requires fewer biological resources—less expenditure of energy digesting—and therefore won't place stress on the body. Plus, it is highly nourishing, which is itself a stress-reducing quality. Less uncomplementary stress translates into more drive, and drive is the catalyst for change. Following the dietary principles of the Thrive Diet will have a snowball effect: The body will begin to adapt to the changes, thereby reducing its stress level, which in turn will pave the way for even greater progress.

Food production is also a big culprit in nutritional stress. Conventional farming involves the ongoing use of chemical fertilizers, herbicides, and pesticides on food crops. Unlike organic farming, conventional farming employs chemical dustings to discourage insects and rodents from eating the crops. If a pest deterrent—poison—is sprayed on both the crops and the soil, there is a good chance it will find its way into our food. Designed to kill small pests, pesticides when consumed by humans can at the very least cause a reaction from the immune system as it attempts to defend the body. People with suppressed immune function will likely experience even more of an impact, sometimes succumbing to sickness.

Ground water seepage is a concern, too. Will the pesticides, having made their way into the soil, eventually end up in the water supply? According to some experts, this is exactly what is happening. Municipal drinking water supplies have tested positive for agricultural runoff. Drinking water that

contains pesticides will obviously have an adverse effect on our immune system and health.

~~As destructive and prevalent as uncomplementary stress is, its positive aspect is that we have control over it. Understand it and take steps to eliminate it, with the Thrive Diet as your guide.~~

complementary stress

I call the right amount of stress to stimulate renewal and instigate growth within the body *complementary stress*. Exercise is a form of complementary stress. Essentially nothing more than breaking down muscle tissue, exercise is the best way to stimulate regeneration of the cells.

Have you ever noticed that those who exercise regularly look younger than those who don't? Although we have no control over our chronological age, our biological age is within our control. Biological age refers to the time that has passed since body cells last regenerated. When exercised, the body must regenerate its cells more rapidly than when idle. Depending on activity level, six to eight months from now our bodies will have regenerated nearly 100 percent of their tissue at the cellular level. This new tissue will literally be made up of what we eat between now and then. The body of an active person is forced to regenerate rapidly; therefore, it consists of more recently produced—*younger*—cells, making for a younger body.

Exercise is also complementary in its ability to raise the body's tolerance to physical activity. If a person exercises regularly and is in fair shape, everyday physical activities will not produce a stress response. This is significant. Here's why. If someone who exercises regularly walks up a few flights of stairs, for example, the strain from doing so will be far below what the body is accustomed to enduring in a workout. The strain on the body from ascending the stairs will not even be noticeable, meaning no stress response. Cortisol, the body's stress-fighting hormone, will not rise, and the immune system will not in turn decline. A fit person who engages in even minor physical activity will be less likely to succumb to ailments than will a person who does not exercise consistently.

Similarly, people who jog on a regular basis experience no stress response from walking and very little from running slowly. Conversely, the body of a person who does not exercise regularly will perceive minor physical activity as a strain, and this will trigger a stress response. This is something to be mindful of when beginning an exercise program. Until the body has adapted to the higher level of stress, the immune system will be vulnerable. (Avoiding contact with people who have a virus until your body has adjusted to the higher level of exercise is a good idea.)

The right balance of exercise strengthens us, both mentally and physically. Exercising the optimal amount (which is determined by your ability to recover and deal with other stresses) will strengthen the body as a whole. Gains include improved muscle tone, a reduction in body fat, increased strength-to-weight ratio, improved immune function, clearer thinking, and better sleep quality. Exercise creates a complementary circle: It activates the natural healing and regeneration process of the body.

Ironically, complementary stress can arise when uncomplementary stress is no longer tolerable and so positive change is instigated. When stress reaches a point that it can no longer be suppressed, dealt with, or tolerated, it begins to motivate and prompt action; change *must* transpire. Mild dissatisfaction in the workplace, for example, is among the least healthy of long-term situations. Since it is usually bearable on a day-to-day basis, it is often tolerated—sometimes for years. The cumulative effect of this daily mild discontent is stress-related health problems. However, when job dissatisfaction reaches the point at which it is no longer tolerable, action for change *will* occur. Like a slow leak in a car tire, you may tolerate it, refilling the tire with air as needed. Yet, if the tire were to rip open, making driving impossible, you would change it immediately. Many people put up with things that are unpleasant but tolerable, rather than changing them; their situation needs to become unbearable before they take action. So, in effect, an unbearable job is better than one that is simply dissatisfying, since

will be the catalyst for change.

production stress

Production stress is the stress created when you strive to achieve a goal. Ranging from physical demanding training sessions for an athletic competition or working overtime on an important project to sorting out family problems or taking a calculated risk, production stress is not something to slough away from. Sometimes referred to as the “high achiever’s syndrome,” production stress, as its name implies, is an unavoidable by-product of a productive life, a necessary part of modern-day success.

My production stress, when racing Ironman triathlons professionally, was physical—it was the a times-unhealthy amount of exercise that I had to do in order to improve as an athlete. This physical production stress differed from complementary stress in the sense that it was actually in excess of what was healthy. The 35 hours of weekly training required to be competitive takes its toll on the body. Before I could undertake this type of training, I had to build a platform of optimal health to support it. However, during that intense training, it was no longer about health but performance—such is the nature of competitive sports. Although the immune system weakens and cortisol levels rise, to engage in this kind of activity for short periods has a payoff. In my case, it was greatly increased fitness and the ability to race at a high level. I had to, however, reduce all other stressors as much as possible to accommodate the augmented physical strain that came with the training load. And, as you may have guessed by now, reducing nutritional stress was the biggest component.

But, as I’ve mentioned, production stress is not limited to the physical. Working tirelessly on a sedentary project can be equally demanding and equally rewarding. Production stress can be viewed as work simply as achieving. For example, working tirelessly on a project at or school can undoubtedly be a strain, yet on completion, you have a product. Whether a tangible one as a result of work or simply more knowledge from study, it is something that you did not have before you *worked* for it. Whatever the circumstances, bringing on production stress by way of striving to achieve something and getting rid of the uncomplementary stress is a sound strategy that I recommend to anyone.

A certain amount of stress is an inevitable component

stimulation

One type of stress can be categorized either as production or uncomplementary stress, depending on how it is used. It is stimulation. Whether for work, school, sport, or any other activity, it is sometimes in our best interest to summon energy through stimulation. When the adrenal glands are stimulated in order to achieve something that could not be done, or done as well, without this stimulation, the stress that results can be classified as production stress.

Here’s an example of a sensible way to use stimulation as production stress. An athlete who has recalibrated his diet (I explain how to do this in Chapter 2) by eating a clean diet and abstaining from stimulating foods such as refined sugar and coffee drinks a cup of yerba maté (a South American herb tea) before a race. The caffeine in the yerba maté will stimulate his adrenal glands, improving his endurance and helping him achieve a better performance than he might otherwise achieve. This will also bring about greater fatigue within a day or two, and that’s fine. At the time of the race, the athlete simply borrowed energy from the future to fuel his performance. Extra fatigue a day or two later will be a small price to pay for his performance. The same holds true for those trying to get more done in work. Stimulation can enable them to achieve more in the short term.

However, if this borrowing strategy is used too often, it will lose its effectiveness and simply

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