

Eat STOP Eat

The Ultimate Guide to Intermittent Fasting for Effortless Weight Loss and Lifelong Health

Brad Pilon

- Expanded Edition -

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The information in this book is for educational purposes only. The information in this book is based on my own personal experiences and my own interpretation of available research. It is not medical advice and I am not a medical doctor.

The information within this book is meant for healthy adult individuals. You should consult with your physician to make sure it is appropriate for your individual circumstances. Keep in mind that nutritional needs vary from person to person, depending on age, sex, health status and total diet.

If you have any health issues or concerns please consult with your physician. Always consult your physician before beginning or making any changes in your diet or exercise program, for diagnosis and treatment of illness and injuries, and for advice regarding medications.

This book is dedicated to the loving memory of Dr. H. Frank Farmer

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A Special Note on This Edition

First of all, let me be clear that I was well aware of the immense gap between peoples' attitude toward health and fitness and the theories found within this book back when it when was first published in 2007.

I knew that people had generally accepted that strict dietary restraint and an almost relentless workout program were essential for weight loss. Not only this, but it was believed that a serious lifestyle modification had to occur that made you almost obsessed with health and nutrition.

I was all too aware that for some curious reason we had accepted the idea that losing weight had to be extremely difficult and the concept that long-term weight loss success meant a life of dedication and extreme discipline.

Back in 2007, even the slightest suggestion that we could actually cause a genuine reduction of body fat WITHOUT extremely regimented and inflexible dietary restrictions was often met not only with disbelief, but also hostility. Few were prepared to hear or accept a simpler solution.

The diet industry is huge, and worth billions of dollars in annual profits. This not only includes the obvious examples of over the counter diet pills, but also weight loss centers, weight loss coaches, weight loss books, and even on-line weight loss societies.

Combine this with the shocking boom of twenty-something year old Internet marketers making millions selling 'diet advice' on-line and it becomes obvious that the weight loss industry was ready for a big, strong dose of common-sense thinking.

I knew that *Eat Stop Eat* was going to cause a shockwave in the diet industry, and that I was going to have to spend a great deal of my time defending the concepts within it.

But like I said, this was almost a given. It is the NORM for radical new concepts that receive a lot of attention to arouse a sharp division of opinion among expert 'commentators'.

Yet the fight for *Eat Stop Eat's* acceptance was not nearly as uphill as I had imagined. Sure, it had its detractors and nay-sayers, but for the most part even the harshest scientific critic quickly came to realize the simplicity and effectiveness of *Eat Stop Eat* and appreciated that it was supported by very sound and logical scientific evidence.

It seems that in a matter of just 3 short years, *Eat Stop Eat* has gone from being a controversial 'fringe' dietary 'fad' to becoming an accepted dietary approach to losing weight that is being supported by doctors, dietitians, and other mainstream health experts.

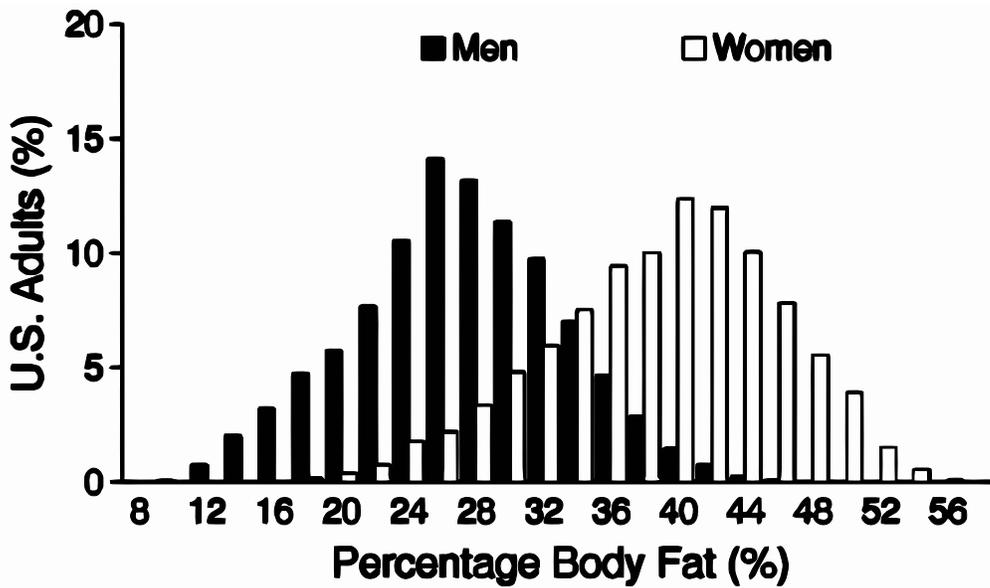
Biologist J.B.S. Haldane said it best when he pointed out that there are four stages of scientific acceptance:

- 1) This is worthless nonsense
- 2) This is an interesting but perverse point of view
- 3) This is true but quite unimportant
- 4) I always said so

Eat Stop Eat has hit the “I always said so” phase of acceptance. This is very exciting to me, and many others involved in the diet and weight loss industry.

People have begun to accept that losing weight can be accomplished using a multitude of different diets, as long as the diet created some sort of decrease in caloric intake. Not only this, but the concept that the best diet is the one you enjoy and can stay on the longest, has really caught on.

Despite these facts, there is still a growing amount of nutrition misinformation that is available in the mainstream weight loss industry. And, quite ironically, obesity rates are still increasing. In fact, the average percent body fat in North America has become startlingly high.



(The average body fat for men is 25% and for women is closer to 40%)

Common sense and sensibility merges with the weight loss industry.

The simple truth is that research illustrates an increased supply of food is more than sufficient to explain this obesity epidemic.¹ I am almost positive that no one is happy with the North American average of 25% and 40% body fat for men and women, respectively.² As such, there is still a need to expand on the successful theories of *Eat Stop Eat* to help as many people as possible realize that weight loss does not have to be complicated.

Let's start with what we already know about weight loss:

- Carrying extra body fat is really bad for us, both physically and emotionally.

- Weight loss is not a mystery and the fundamental principles have never changed. It's our ability to apply these principles that dictates how successful we are at losing weight.
- Since you are reading this book, you have a personal interest in weight loss.

A Caveat: Prevention is better than a cure.

While the principles of *Eat Stop Eat* are often only thought of as a way to lose weight, it is important to remember that *Eat Stop Eat* is also an effective way to maintain weight loss, AND to prevent weight gain from happening in the first place.

Simply put, when adapted to fit your own personal lifestyle, the principles of *Eat Stop Eat* can apply to everyone.

Preface

Take a second before reading this book and think about all the diets you have heard about and read about in recent years. Each diet had its own little hook that made it stand out, and each diet had thousands of loyal followers that swore that their diet was the only one that worked.

Now consider the real-world evidence that is right before your eyes. Every day you see hundreds of people, all with different body shapes and all following different diets.

I will use professional bodybuilding as an example. Imagine two groups of bodybuilders ready to step on stage at the highest level of competition; their veins popping out everywhere, with tanned, oiled skin, and almost nonexistent body fat.

The first group consists of bodybuilders from the 1950's and 1960's. These bodybuilders were able to get into phenomenal shape using diets that were low in fat, high in carbohydrates with moderate amounts of protein. The second group consists of bodybuilders from the 1990's and beyond. They got into phenomenal shape using very different diets that consist of moderate amounts of fat, low carbohydrates, and very high amounts of protein.

Both groups of bodybuilders were unbelievably lean. Both groups used various supplements and drugs. However, both groups followed very different nutrition plans. Yet, somehow they all managed to get their body fat down to unbelievably low levels.

Throughout the last five decades, the diets of bodybuilders have changed dramatically. Depending on the bodybuilder and the era, they may have eaten six meals a day, or they may have eaten more than a dozen. Some bodybuilders ate red meat while others did not. Some did hours of cardio, some did no cardio at all, yet they were all able to lose fat and get into 'contest shape'.

The reason all these bodybuilders could get in shape on so many different styles of diets is simple: for short periods of time, every diet will work if it recommends some form of caloric restriction. And if you follow a calorie-restricted diet you will lose weight, guaranteed.

The problem is, you simply cannot follow a super-restrictive diet for a long period of time. Sure, a truly dedicated individual may be able to follow a very restrictive diet for 12 weeks and get into phenomenal shape. With the right amount of dedication, a person can even look like they just stepped off the cover of a fitness magazine. And a very small and unique group can do this for years on end.

For the rest of us, this way of eating is too restrictive, too intrusive on our lives, and far too limiting to be done effectively for any real length of time.

Now, what if I told you that these types of long restrictive diets are simply not necessary for weight loss? What if I told you that there is a way to eat and a way to live that can give you amazing health benefits, help you lose weight, and does not involve any prolonged periods of food restrictions, eating schedules, supplements, or meal plans?

In the following pages I am going to share with you a discovery that I made as a result of years of research and schooling, a career in the sports supplement industry, and an obsession with nutrition.

I am going to present you with the reasons why I think most diet plans are unnecessary, too restrictive, and ultimately too complicated to work long term. And most importantly, I am going to describe what I believe to be the single best way to eat and live that will help you lose weight and keep it off, without any of the complex plans, rules, and equations that is typical of most diets.

After all, I don't consider this method of eating a diet. It's a way of eating that restricts calories, but that can also ultimately grow into a way of life.

I must warn you in advance, many of these ideas are 'different' in that they do not agree with the current nutrition trends. I promised myself when starting this project that I would not merely accept the current rules of nutrition just because they happened to be the rules that are currently *en vogue*.

As the bodybuilders in the example prove, many different styles of nutrition can result in the development of astonishing physiques. There probably is no "right" way to eat. The best we can hope for is finding the way that works the best for you.

Nutrition, just like all science and medicine, is always evolving and changing. So even though the ideas in this book may be unconventional by today's standards, I believe that someday they just might be the new rules of nutrition!

I am positive that if you read this book with an open mind, you will find that everything I have written makes sense. It may be different than what everyone else is telling you, but it is proven and backed up by a large quantity of scientific research, and it can change your life.

How it All Started

I walked away from my career in the sports supplement industry in May of 2006. It wasn't a bad split, and I did not want to give up on the industry altogether, I just wanted to start fresh.

To fully explain this decision, I have to take you back about twenty years.

I have always been obsessed with exercise, health, and nutrition. At 10 years old, I could already boast a very impressive collection of *Muscle & Fitness Magazine*, and a couple of years later I was also collecting issues of *Men's Health*. I can remember reading about bodybuilders like Lee Haney, Arnold Schwarzenegger and Lou Ferrigno and all of the articles concerning their diet and exercise programs. It was these articles that piqued my interest in the science behind fat loss.

At 16 years old, I had a subscription to the *American Journal of Clinical Nutrition*. I would read any research paper that involved nutrition and fat loss. It would take me about a day to read each article because I had to stop and check almost every word in a medical dictionary.

At 17 years of age, I started working at a local supplement store. This was my first official step into the health and nutrition industry and I have never looked back.

When I started studying nutrition at university, I had only two goals – to learn everything I possibly could about nutrition and metabolism, and to graduate with honors. In the spring of 2000, I accomplished both of them. Almost immediately after graduating from university, I was fortunate enough to be hired as a research analyst at one of the world's leading supplement companies.

Fast-forward to June of 2006. I had just spent the last six years of my life working in one of the most secretive industries in the world. During this time, I had been entrusted with protecting some of the most confidential information in the entire industry. I was the person responsible for the inner dealings of our Research & Development Department. Unfortunately, this was part of the problem.

Part of my job was to review bodybuilding and fitness magazines. Every month I would have to read through the top ten magazines on the market. I was constantly reading about the 'latest and greatest' diet methods. After years of reading magazine after magazine, I didn't know what to believe anymore. Each month, it seemed like the newest diet methods contradicted the diet methods that were in last month's magazines. I started to think that the weight loss industry was full of nothing but confusing and constantly recycled misinformation.

When it came to the science of losing weight, every so-called 'nutrition guru' and weight-loss personality had his or her own theories on what did and didn't work. After years of reading and evaluating all of these nutrition and diet programs, I was actually starting to ignore my previous doubts and get consumed by the hype!

Despite all of my formal education in the nutrition field, even the most absurd diet theories eventually started to sound logical to me, even though I had never come across any research that could convince me that these theories were supported by strong scientific evidence.

In reality, the vast majority of what I had read in these magazines was just theories and speculation. Some of them were based on science while others were complete gibberish. Many were contradictory to one another, and others even defied the fundamental laws of thermodynamics and science.

Month after month, dozens of magazines would appear on my desk, and month after month, I would see new and old diet ideas being trumpeted as the newest, most effective way to 'blowtorch through stubborn body fat'.

At this point, I noticed a funny thing about the industry - if an idea is published enough times, and if enough people accept it, it becomes true, no matter how inaccurate it really was.

Whoever said, "you can say the same lie a thousand times but it doesn't get any more true," has obviously never been involved in the nutrition industry!

The bottom line is that I got into the sports supplement industry for the same reason I eventually left. I wanted to understand the true rules of weight loss, and I wanted to figure out how we should really eat for health, energy, peak performance, and for weight loss.

I ended up leaving my career in the industry so that I could write this book.

Introduction

As part of the background research for this book, I made it my goal to uncover the true scientific facts behind weight loss and nutrition.

I'm not talking about the scientific 'facts' that are thrown around every day by food companies and marketing gurus. You know, the '*eat this, not that*' facts or the '*recent research has shown*' 'facts'. I wanted to find the cold, hard truths. I was looking for the nutritional equivalent of death and taxes.

My first step in this quest was to read every nutrition and diet book I could get my hands on. I read and re-read the following books:

The Atkins revolution, Protein power, Body for Life, The Zone, The South Beach Diet, French Women Don't Get Fat, The Warrior Diet, The Metabolic Diet, Volumetrics, The Obesity Myth, Health Food Junkies, An Apple a Day, What to Eat, the Omnivore's Dilemma, Real Foods, The End of Overeating, Eat Right 4 Your Type, Good Calories Bad Calories, Food Politics, as well as various 'underground' books on diet and nutrition like Dan Duchaine's *Body Opus*.

I didn't just read these books. I analyzed them. I compared marketing tactics, writing styles, and persuasion techniques. If the book quoted scientific references, I sought

out the reference and reviewed it in its entirety. My goal was to dissect our current nutrition beliefs and to find track their evolutions and origins.

On top of this, I also read and critically analyzed hundreds (not an exaggeration) of research papers, and re-read several of my nutrition textbooks.

I even went so far as to enroll in graduate school to study Human Biology and Nutritional Sciences, and let me tell you, it took an almost unhealthy desire to uncover the truth to drive me to re-enroll in school after a seven-year hiatus, with a pregnant wife and a busy consulting job! It was a long commute back and forth from school every day, but having the opportunity to study nutrition at the graduate level was worth the sacrifice.

So what did all of my research uncover? Firstly, I can say that most (but not all) people who talk about scientific research on-line or in magazines are not credible sources of scientific information, nor can they properly analyze the meaning of any scientific research.

What they do is called “data mining”, where they scan research papers looking for interesting sound bites or quotes. Basically, they try to summarize 2 to 3 years worth of scientific investigation in one short and snappy quote. It’s great reading, but it rarely gets to the truth of the topic. This is not meant as a self-serving ego-boosting statement, but rather as a testament to the importance of obtaining a proper education.

I also realized that even having an advanced education in one specific topic does not make you an expert in all things health related. Having a PhD in muscle physiology does not make you an expert in fat loss, and vice versa. Nor does being a Medical Doctor necessarily give you the scientific background you need in order to truly understand the complexities of nutrition, and more importantly to be able to see

through the deceptiveness of nutrition marketing (many U.S. medical schools fail to meet the minimum 25 required hours of nutrition education set by the National Academy of Sciences).³

Finally, I can tell you that based on my research studying nutrition, fasting, and weight loss in graduate school, I have realized that there are only two absolute truths when it comes to nutrition and weight loss.

1) Prolonged caloric restriction is the only proven nutritional method of weight loss

and

2) Human beings can only be in one of the following states: Fed or fasted.

That's it. In my opinion, these are the only two facts that are undeniable. Everything else is open for debate, which is the problem with nutrition today – it is made out to be so complicated and confusing that nobody knows what to believe.

Most scientific research findings seem to do nothing more than add to the already confused and muddled nutritional theories and diet recommendations that exist, and the cause is clear as day – research on nutrition and food is no longer conducted to improve our health and well being. It is conducted for marketing purposes and as a method to get us to buy one product over another, and it is all based on us being constant consumers.

In fact, it was in an amazing article in Scientific American magazine written by renowned food expert Dr. Marion Nestle where I became aware that it was in the early 1980's food companies had no choice but to attempt to change the way we eat. Faced by stockholder demands for higher short-term returns on investments, food companies were forced to expand sales in a marketplace that already contained an excessive amount of calories.

Their only option was to seek new sales and marketing opportunities by encouraging formerly shunned eating practices such as frequent between-meal snacking, eating in bookstores, and promoting the money-saving value of larger serving sizes.⁴

To be clear, our entire style of eating in North America has been molded to support the interests of major food companies.

You may be wondering 'How can a select few people change the way entire countries decide to eat?' Well, in order to promote this new style of eating, enormous amounts of money had to be spent on research supporting the health benefits of this style of eating.

As far as I can tell, most research being conducted on food and nutrition these days is done simply for the purpose of food marketing. This is because the money that funds nutrition research is typically donated by a food company or supplement company.

This so-called 'donation' or grant comes with the hope and expectation that the research will produce a health claim or other marketing claim that the company can then advertise as a selling feature for their product. As it turns out, health claims on foods and supplements can be incredibly lucrative, and the politics behind nutrition are undeniable.

It was in a book titled “*What to Eat*” by author and researcher Marion Nestle (the same author who wrote the article in Scientific American), where I read the following quote – “*The real reason for health claims is well established: health claims sell food products.*”⁵ I couldn’t agree more.

The bottom line is that research creates health claims, and health claims sell products. Whether the product is some new ‘functional’ food or the latest diet program, if research says it works, it will sell more, guaranteed.

Very soon into my readings I began to realize that the research on weight loss had become so skewed with politics that it has turned into the world’s most ironic oxymoron. After all, the research was trying to uncover the completely backwards idea; *‘what should we eat to lose weight?!’*

When I realized that almost all nutrition research was working under this completely backwards paradigm, I understood that I had only one choice. If I was to avoid all of the bias and vested influence in today’s nutrition research then I had to go back to the absolute beginning. I had to conduct a thorough review of exactly what happens to human beings in the complete absence of food.

The Fasted State

The definition of fasting is quite simple. I've read through countless dictionary entries and website descriptions of fasting, and have decided that the best definition of fasting is the following: ***“The act of willingly abstaining from some or all food, and in some cases drink, for a pre-determined period of time.”*** The key word in this definition is “willingly” as it is the difference between fasting and starving. Other than this one small difference, the net result is the same – the purposeful abstinence from caloric intake over a given period of time.

Now, a lot of people confuse 'starvation' with wasting - wasting is the end result of prolonged caloric restriction - where your fat reserves are almost completely used up and can no longer supply your body with enough energy to meet its needs. This is when you see abnormal physiology such as muscle wasting (loss) and a slowed metabolism and altered hormone profiles. So 'wasting' is the end result of prolonged extreme calorie restriction – occurring after months or even years of a chronically low intake and possible nutrient deficiencies, but not something that happens in a 72-hour period without food.

So you are either fed or fasted, however 'fasted' can mean 12 hours or 12 weeks, so for the purpose of my research I decided to focus on short-term fasting, studying the metabolic effects of fasting between 12 and 72 hours. The minute you start fasting (stop eating) your body slowly begins to enter the fasted state. As you slowly use up

the energy and nutrients supplied by your last meal, you also slowly begin to ramp up the amount of energy you supply from your body fat. For most people you fully enter the fasted state, using mostly body fat as a fuel, by about 24 hours since you finished your last meal.

So 'fasting' begins the moment you stop eating, after which you slowly enter the 'fasted state'. The amount of time it takes to fully enter the fasted state depends largely on the size of your last meal, but in general occurs somewhere between 16 and 24 hours of fasting.

Throughout history, various cultures have used fasting in many different types of rituals and celebrations, and still use fasting within those traditions to this day. Almost all major religions have a degree of fasting built into them. From political protests to healing rituals, and even for good-old weight loss, there are many historical accounts of various people fasting for different reasons. With the exception of fasting for religious purposes, the practice of fasting has all but disappeared in North America.

Our ancestors also fasted simply due to the poor availability of food, or as a way to cleanse and heal their bodies. While modern-day humans in many developed countries are used to being able to eat a solid three meals per day, animals in the wild eat only when food is available, and most likely this is also how our hunter-gatherer ancestors ate.

And let's not forget that the majority of the world's population still lives without adequate food supply. The fact that we're faced with a problem of too much food makes us the lucky ones. Of course, this creates an odd sort of irony in the fact that you are now reading a book about how to deal with the consequences of the extra food.

While researching, I observed that studying short-term fasting was an excellent way to uncover the truth behind nutrition and fat loss. This was because people with vested interests in selling consumable products have no interest in studying fasting.

Fasting automatically rules out the use of any sort of food, health supplement, or newly touted “functional foods”. Much to the dismay of food companies, you can’t put fasting into a pill and sell it, and as we have already discussed, the purpose of most nutrition research these days is the development of new products.

By default, because you do not consume anything while you are fasting, research on fasting contains very little bias from large food company funding. After all, why would a food company spend money proving there is a benefit to eating **less** of their products?

Another benefit of studying fasting is that there is an extremely large volume of research that has been conducted on fasting, and more research comes out almost every day. So anyone who suggests there is no scientific data on fasting couldn’t be further from the truth.

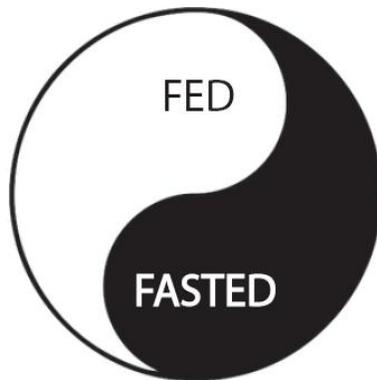
The Disappearance of the Fasted State

As I stated in the beginning of this book, from a nutritional point of view, a human being can only be fed or fasted. By saying this, I mean that we are either in the process of eating and storing the calories that come from our food, or burning these same calories as we burn stored energy. This energy is stored in the form of fat and glycogen (the storage form of sugars and carbohydrates in our bodies).

Our bodies are designed to eat food when food is available and use the calories we have stored as fat when food is scarce. These are our only two options. Consider them the Yin and Yang of nutrition and health.

FED - Eating and storing Calories

FASTED - Not eating and burning Calories.



Fasting is the simplest method our body has for maintaining its caloric balance. Store a little when we eat, burn a little when we don't eat. Recent research suggests the problem is that we spend as much as 20 hours a day in the fed state.⁶ We are constantly eating and storing food and we never really give ourselves a chance to burn it off.

So the yin and yang of fed and fasted has been replaced by a constant fed state, where we helplessly try to figure out how to continue eating and somehow lose weight at the same time. This is a very scary scenario when you consider the fact that our bodies are designed to store fat whenever it is provided with an amount of calories beyond its needs. In order to restore the balance of fed and fasted states, we have no choice but to go through periods of under-eating to match our large periods of over-eating.

As a very crude example, imagine a hunter who has caught and eaten an animal, and foraged around and found some berries. Once the meat is gone and the berries have all been picked, the hunter has no choice but to move on in search of more food. Based on this ancestry, it seems logical to say that this is precisely how our bodies were designed to function.

So if our bodies were designed to feed and then fast, why doesn't anyone fast anymore?

Most likely it is because the concept of fasting for weight loss and health has been villainized in western society as it goes directly against one of the most basic principles of business – supply and demand. To the food industry and various government agencies, the idea of people eating less is bad for business.

Consider that each day in the United States, the food industry produces enough food to supply every single person with almost 4000 calories.⁷ On top of that, 10 billion U.S. dollars per year goes into the advertising and promotion of this food.⁸ It would be a huge financial disaster for many food companies if all at once everyone in the United States decided not to eat for one day out of the week.

This is why the food and nutrition industry is willing to suggest many different theories on how to lose weight, as long as it means we continue buying and consuming foods. And not only that, they're trying to sell the idea of buying MORE foods and consuming it MORE often.

Think of all the diet suggestions you know. They all rely on the continued intake of food. *Eat six small meals a day. Eat high protein. Eat breakfast (the TV commercials say it's the most important meal of the day). Eat cereal. Overeat, cycle your carbohydrates, cycle your proteins, Eat lots of high calcium foods. Eat whole wheat. Take diet pills.* Whatever the recommendation, it always revolves around making sure that the population is continuously consuming food and food supplements.

After all, this is how companies refer to us - we are consumers (not people). And if you look up the word 'consumer' in the thesaurus you will find that its synonym is 'customer'. How many times have you heard a company representative say things like, "We value our customer"? Well, of course they do! We buy (and consume) their products! Without us, there would be no profits and no company.

In a day and age where so many people are trying-and failing- to lose weight, it seems improbable that the answer is simply dieting. In fact, in his very controversial book "*The Obesity Myth*," author Paul Campos states he does not believe that dieting is an effective method of weight loss. Indeed, Mr. Campos goes so far as to say the idea that "People could lose weight if they really wanted to" is, in fact, a lie.⁹

Although I'm not willing to go quite as far as Mr. Campos, I am willing to say that every single one of today's popular diets is doomed to fail in the long term. In my opinion, no matter how strong your willpower, it will eventually be overridden by the power of marketing, advertising and the lure of great tasting food. After all, no one really wants to diet, we just want to look better with less fat on our bodies (Dieting just happens to be a rather uncomfortable means to this end).

All of this raises the question – 'have we been led to overlook the simplest form of reducing calories and losing weight - short periods of fasting - in an effort to keep us consuming?' The answer seems to be a resounding 'Yes!'

Forget Everything You Have Ever Read About Fasting

The amount of anti-fasting misinformation that can be found on the Internet is astounding. This is despite the fact that our bodies were designed to fast, and that almost every major religion and culture has some sort of fasting built into its rituals to this day, and that most scientific studies that require blood collection also require their subjects to be fasted.

Information on fasting and dieting is prevalent in cyberspace and in popular diet books. However, this information should be read with extreme caution. Ridiculous statements such as *“Fasting will KILL your metabolism,” “fasting deprives your body of nutrients and does nothing to help you modify your dietary habits,” “The weight loss from fasting comes entirely from muscle,”* or *“The weight loss from fasting comes entirely from water”* and finally *“If you do not eat every 5 hours your liver releases sugar, which causes an insulin surge making you gain fat even without food”* are typical of the fasting misinformation that is available.

This is an example of ‘authoritative parroting’ where people simply repeat what they have had heard from authorities on the topic, without actually stopping to check and see if what they have heard is correct. So the same misinformation is passed on, regurgitated, repeated, and made true; solely on the basis of the source, rather than whether or not it is actually correct.

Other incorrect but often repeated statements include the notion that you will become hypoglycemic (have low blood sugar) if you do not eat every two to three hours and that fasting will prevent your muscles from growing. Typically, these statements are followed by more of the same old nutrition mantra “*eat multiple small meals a day,*” eat “*high protein foods every two to three hours,*” “*avoid milk and dairy products,*” and all the other popular ideas about dieting.

The amazing thing is almost all of the scientific research I reviewed provided evidence in direct opposition to the misinformation found in diet books and on the Internet. I found very convincing evidence that supports the use of short term (as brief as 24 hours) fasting as an effective weight loss tool.

This included research on the effect that fasting has on your memory and cognitive abilities, your metabolism and muscle, the effect that fasting has on exercise and exercise performance, and research that very conclusively exposes the myth of hypoglycemia while fasting.

What made this even more interesting is that this type of fasting not only helps you lose weight, but also vastly improves many markers of health and comes with a very impressive track record. After all, outside (and inside) of North America, millions of people have been using intermittent fasting for centuries.

As cutting edge as it may seem, taking brief breaks from eating is hardly anything new. It’s just something that a lot of people have been trying very hard to keep you from realizing!

In fact, many people stumble onto fasting when they very first attempt to lose weight, and they usually see some success. They only give up on fasting after being convinced that it is bad and wrong by anti-fasting propaganda.

From a marketing stand point fasting is boring. It does not have a sexy marketing angle and it certainly does not do anything to improve the bottom-lines of food companies. In this day and age, a diet has to have a hook or a catch. It needs something to make it different and special, and this typically involves some special way of eating, but never a special way of NOT eating.

Here is the common sense reason why fasting may work better for you than any other diet you have ever tried:

Think of all the diet rules you have seen lately. It might be something that says you need to eat your carbs separately from your fats, or that you need to eat zero carbohydrates all together. Maybe it's that you need to eat all fat or that you need to cycle your carbohydrates or your protein. Perhaps it's the idea that you must only eat raw foods or organic foods, or it's a diet planned around a hormone like ghrelin, adiponectin, leptin, estrogen or testosterone...etc and etc and etc.

Now consider this:

If these rules were ACTUALLY true, then Lap Band surgery would not work.

But it does, and it works very well.^{10,11}

During lap band surgery, a small silicon band is placed around the top portion of a person's stomach, effectively making your stomach 'smaller'. It's a very drastic step that involves a surgical operation, but nonetheless it is extremely effective at helping people lose weight simply because it makes people eat less. Not just less carbs, or less fat, but less everything. No periodic refeeds. No cycling. No crazy food combining. They simply eat less.

The bottom line is that a diet really does NOT need a catch to be effective. In fact, I would argue that the less complicated a diet is, the better its chances of helping you obtain long lasting weight loss.

The specific type of fasting I am about to describe is not just a tool for weight loss, but rather could be considered a fairly simple (yet effective) lifestyle adjustment that can help you lose weight and improve your health WITHOUT having to resort to special 'rules of eating', taking pills or powders or electing for invasive surgery.

Fasting and your Metabolism

In my review of fasting, I found some very interesting information, most of which contradicts much of today's accepted 'rules of nutrition'. Most startling is the fact that being in a fasted state for short periods of time will not decrease your metabolism.

If you have followed any of today's popular diets, you may know that they are all based on this idea. The story they are telling goes like this: *If you lower your calories too much, even for a short period of time, then you will stop losing fat because your body has entered 'starvation mode' and your metabolic rate will slow to a standstill.* In fact, this statement could very well be the basis for today's weight loss industry. However, it turns out that it is factually incorrect.

Our metabolism, or more correctly our metabolic rate, is based on the energetic costs of keeping the cells in our bodies alive. For example, let's say we put you in a fancy lab and measured the amount of calories you burned in one day sitting on a couch doing nothing. Let's assume that number was 2,000 calories. This would be called your basal metabolic rate; 2,000 calories would be the amount of calories you need to eat to match the amount you burn simply being you.

Now, let's say you moved around that day, perhaps 30 minutes of walking. You might burn an extra 100 calories bringing your daily total number of calories burned up to

2,100. Your basal metabolic rate is always 2,000, and then any extra energy you expend moving your body (such as when we exercise) is added to that number.

So in this example, you are going to burn 2,000 calories per day no matter what you do. So why are we being told that our metabolism will slow down if we do not eat for an extended period of time?

The answer lies with an interesting metabolic process of eating called "*The thermic effect of food*", and some clever interpretation of this rather simple process.

The act of eating can increase your metabolic rate by a very small amount, and this is what is referred to as 'the thermic effect of food'. This increase in metabolic rate is a result of the extra energy your body uses to digest and process the food.

It takes energy to break down, digest, absorb and store the food once you eat it. This 'energy cost' has been measured in laboratory settings and is part of the basis for popular diets that promote the metabolic cost of one nutrient over another.

For example, it takes more calories to digest protein than to digest carbohydrates or fats, so some diets recommend substituting some protein for carbohydrates and fat assuming this will burn more calories. Although this is scientifically true, the amount of extra calories this dietary change will cause you to burn is very small and will hardly make a difference to your overall calories burned in any given day.

As an example, the idea of eating an extra 25 grams of protein so you can burn more calories can appear somewhat ridiculous. If you eat an additional 25 grams of protein, you would be adding 100 calories to your diet just so you can burn 10 more calories! The more logical approach would be to just not eat those 100 calories.

Almost all of the calories you burn in a day result from your basal or resting metabolic rate (the calories it takes just to be alive). Beyond that the only significant way to increase the amount of calories you burn in a day is to exercise and move around.

The research on metabolic rate and calorie intake is remarkably conclusive. I was easily able to find the following research studies that measured metabolic rate in people that were either fasting, or on very low calorie diets:

In a study conducted at the University of Nottingham (Nottingham, England), researchers found that when they made 29 men and women fast for 3 days, their metabolic rate did not change.¹² This is 72 hours without food. So much for needing to eat every three hours!

In another study performed at the Pennington Biomedical Research Center, men and women who fasted every other day for a period of 22 days experienced no decrease in their resting metabolic rate.¹³

In addition, a study published in 1999 found that people who were on very low calorie diets and on a resistance exercise program (i.e. lifting weights) did not see a decrease in resting metabolic rate, and these people were only eating 800 Calories a day for 12 weeks!³⁵

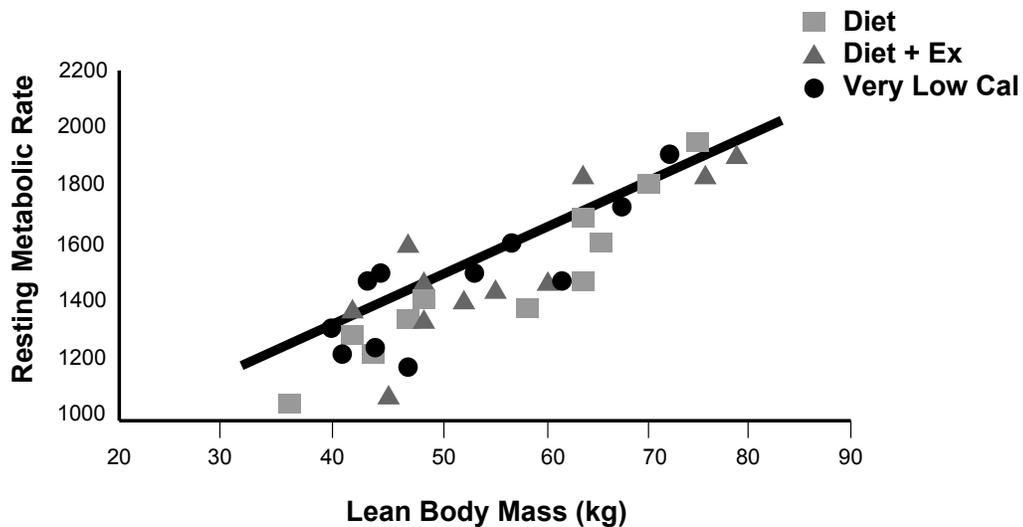
In another interesting study published in the aptly-named journal 'Obesity Research', women who ate half the amount of food that they normally eat for three days saw no change in their metabolism, either.¹⁴

In still more studies, performed on men and women between the ages of 25 and 65, there was no change in the metabolic rate of people who skipped breakfast, or people who ate two meals a day compared to seven meals per day.^{15,16}

In a study published in 2007, ten lean men fasted for 72 hours straight. At the end of their fast their energy expenditure was measured and found to be unchanged from the measurements that were taken at the beginning of the study¹⁷ - Yet another example showing that fasting does not decrease or slow one's metabolism.

The bottom line is that food has very little to do with your metabolism. In fact, your metabolism is much more closely tied to your bodyweight than anything else. And, specifically of your body weight, your metabolism is almost exclusively tied to your Lean Body Mass. This means all the parts of your body that are not body fat.

The more lean mass you have, the higher your metabolism, and vice versa. It doesn't matter if you are dieting, dieting and exercising or even following a VERY low calorie diet. As the graph below illustrates, it is your lean body mass that determines your metabolism.



The only other thing that can affect your metabolism (in both the short term and longer term) is exercise and movement. Even in the complete absence of food for three days, your metabolism remains unchanged.

I find it troubling that every physiologist, medical doctor, and PhD that I have talked to seems to understand this, but many of the personal trainers, nutrition personalities and supplement sales people are completely unaware of this scientific fact.

This is truly a testament to the amazing power and persuasive nature of the marketing that can be found on the Internet and in fitness and nutrition magazines. It is also an illustration of the scientific illiteracy of many of the fitness personalities and marketers you may deal with in your life.

This got me thinking that, if short-term changes in food intake has no effect on metabolic rate, what other myths have I been led to believe as *scientific facts*?

I took it upon myself to examine the science behind many of today's popular diets. I found no difference between any of them in their effectiveness over the long term.

People choosing higher protein, lower carbohydrate diets (similar to Atkins or The Zone) tended to see slightly better weight loss, at least in the short term. However, when these studies extended to more than six months and up to a year, the differences tended to even out.¹⁸

I found only one thing to be consistent with all of these diets. This common finding is the success of any diet can be measured by how closely people can follow the rules of the diet and how long they can maintain caloric restriction.

In other words, a diet's success can be measured by how well they can enforce my first nutrition 'truth' – **'prolonged caloric restriction is the only proven *nutritional* method of weight loss'**.

If the diet plan allows you to stay on the diet for a long period of time, then you have a very good chance of achieving sustained weight loss success.

From what we have seen, there is a large amount of science that supports the use of short term fasting as an excellent way to create a dietary restriction, and it seems to be an effective and simple way to lose body fat (which is ideally the goal of ANY weight loss program). On top of that we have also determined that short term fasting does not have a negative effect on your metabolism.

So far, so good. Fasting does not cause any negative or damaging effects on our metabolisms, but that still leaves us with another big unanswered question: What type of effect does short periods of fasting have on our muscles?