

Eat **STOP** Eat

The Radical New Approach to Nutrition
That Can Burn Fat, Improve Your Health
and Might Just Save Your Life

Brad Pilon

Copyright © 2007 by Strength Works, Inc.
All rights Reserved

No portion of this manual may be used, reproduced, or transmitted in any form or by any means, electronic or mechanical, including fax, photocopy, recording, or any information storage and retrieval system by anyone but the purchaser for their own personal use. This manual may not be reproduced in any form without the express written permission of Brad Pilon, except in the case of a reviewer who wishes to quote brief passages for the sake of a review written for inclusion in a magazine, newspaper, or journal, and all of these situations require the written approval of Brad Pilon prior to publication.

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.

Brad Pilon, Strength Works, Inc.

Contents

Preface	3
How it All Started	8
Introduction	12
The Fasted State	16
The Disappearance of the Fasted State	19
Forget Everything You Have Ever Read About Fasting	24
Fasting and Your Metabolism	26
Fasting and Exercise	32
Fasting and Your Muscle Mass	36
Fasting and Hunger	39
The Health Benefits of Fasting	43
<i>Decreased Insulin Levels & Increased Insulin Sensitivity</i>	46
<i>Increased Lipolysis and Fat Burning</i>	48
<i>Increased Glucagon Levels</i>	50
<i>Increased Epinephrine and Norepinephrine levels</i>	52
<i>Increased Growth Hormone Levels</i>	52
<i>Increased Weight Loss and Increased Fat Loss</i>	54
<i>Health Benefits – The Conclusion</i>	55
The Eat Stop Eat Way of Life	57
<i>What to do While Fasting</i>	62
Eat Stop Eat Conclusions	65
Eat Stop Eat Frequently Asked Questions	67
References	74

Preface

Preface

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

Now think about the evidence. I will use bodybuilding as an example. Picture two groups of professional bodybuilders in contest shape ready to step on stage; their veins popping out everywhere, skin tight, body fat almost nonexistent.

The first group is bodybuilders from the 1950’s and 1960’s. These bodybuilders were able to get into phenomenal shape using low-fat, high-carbohydrate, moderate-protein diets. The second group is bodybuilders from the 1990’s and beyond. They get into phenomenal shape using very different moderate-fat, low-carbohydrate, and high-protein diets.

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

Some bodybuilders ate six meals a day, some ate more than a dozen. Some ate red meat, some did not. Some did hours of cardio, some didn’t do any at all. Yet, they all were able to lose fat and get into ‘contest shape’.

This is because 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 can't follow a restrictive diet for a long period of time. Sure, a truly dedicated individual can 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 a model from the cover of a fitness magazine. And a very small, very 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 long restrictive diets aren't 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 that does not involve any prolonged periods of food restrictions, eating schedules, supplements or meal plans? Would you be interested?

In the following pages I am going to share with you a discovery that is the result of countless hours of research, years of 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 not necessary, 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 to 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 a diet. It's a way of eating that can ultimately grow into a way of life.

I must warn you in advance, many of these ideas are 'controversial' in that they don't go along with current nutrition trends. I promised myself when starting this project that I would not just 'accept' the current rules of nutrition just because they happened to be the rules that are currently *en vogue*. After all, as our bodybuilders in the example prove, many different styles of nutrition have resulted in the development of astonishing physiques.

So even though the ideas in this book may be radical now, in twenty years, 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 then what everyone else is telling you, but it is proven by a large amount of scientific research, and it can change your life.

I hope you enjoy the book.

Your author,

Brad Pilon

How it All Started

How it All Started

It was a year ago today that I walked away from my career in the sports supplement industry. Don't get me wrong, it wasn't a bad split, and I didn't want to give up on the industry altogether, I just wanted to start fresh.

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

I have always been obsessed with exercise, health and nutrition. Before the age of ten, I owned a very impressive collection of *Muscle & Fitness*, and a couple of years later, *Men's Health* magazines. I can remember reading about bodybuilders like Lee Haney, Arnold Schwarzenegger and Lou Ferrigno and all of the articles about diet and exercise programs. It was these articles that peaked my interest in the science behind fat loss.

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

At seventeen, 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. And in the spring of 2000, I accomplished both of them.

Immediately following graduation, and with a surprising mix of good luck and great timing, I was hired to be 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. I was constantly reading about the 'latest and greatest' diet method. 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. It felt like the weight loss industry was full of nothing but misinformation.

When it came to the science of losing weight, every 'nutrition guru' and 'expert trainer' 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 believe the hype myself!

Despite all of my formal education in this very field, theories like high protein diets and cycling carbohydrate intakes eventually started to sound logical to me, even though I had never come across any convincing research to support any of these theories.

After all, they were just theories. Some were based on science, while others were complete gibberish. Many were contradictory to one another, and others defied the basic laws of thermodynamics and science. However, I noticed a funny thing about the industry; if an idea is published enough, and if enough people accepted it, it became 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.

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

Introduction

Introduction

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

Now, 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. In one short year, 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, What to Eat, the Omnivore's Dilemma, Real Foods, Food Politics, as well as various 'underground' books on diet and nutrition like Dan Duchaine's *Body Opus*.

On top of this, I also reviewed 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 Nutraceutical 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!

So what did all of my research uncover? Well I can tell you that there are indeed 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 (nutritionally speaking) 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. This is the problem with nutrition today - it's made out to be so complicated and confusing that nobody knows what to believe.

The result of most scientific research seems 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 as a method to get us to buy one product over another, and it's all based on us being 'constant consumers'.

As far as I can tell, most research being conducted on food and nutrition these days is done simply for the purpose of marketing. This is because the money

that funds nutrition research typically comes from a food or supplement company. This ‘donation’ or grant comes with the 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 renowned author and researcher Marion Nestle, where I read the following quote – “*The real reason for health claims is well established: health claims sell food products.*”¹ 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 research 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 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 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.

There are some obvious benefits in studying fasting as a way to find the truth behind nutrition and fat loss. The most important of which is that people with vested interests in selling products have no interest in studying fasting.

Fasting automatically rules out the use of any sort of food, health supplement or functional food. Much to the dismay of food companies, you can't put fasting into a pill and sell it, and as we already discussed, the purpose of most nutrition research these days is the development of new products. So 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 a large volume of research that has been conducted, and more research comes out every day. Fasting has been around since, as near as I can tell, the beginning of recorded history. Almost all major religions have a degree of fasting built into them, and there are many recordings throughout history of various people fasting for different reasons.

In fact, Dr. Michael Eades, author of *“Protein Power”* suggests in an entry to his online blog that fasting may even be the way our ancient Paleolithic ancestors ate²:

“In thinking about the process I came to the conclusion that intermittent fasting was probably the way Paleolithic man ate. We modern humans have become acculturated to the three-square meals per day regimen. Animals in the wild, particularly carnivorous animals, don’t eat thrice per day. They eat when they make a kill. I would imagine that Paleolithic man did the same.”

As Dr. Eades points out, it makes logical sense that our ancestors starved intermittently, depending on the availability of food. There is also evidence to support the fact that many different cultures around the world currently fast. Many people fast for religious or spiritual reasons, and even as a method of weight control. However, in North America, with the exception of fasting for religious purposes, the practice of fasting has all but disappeared.

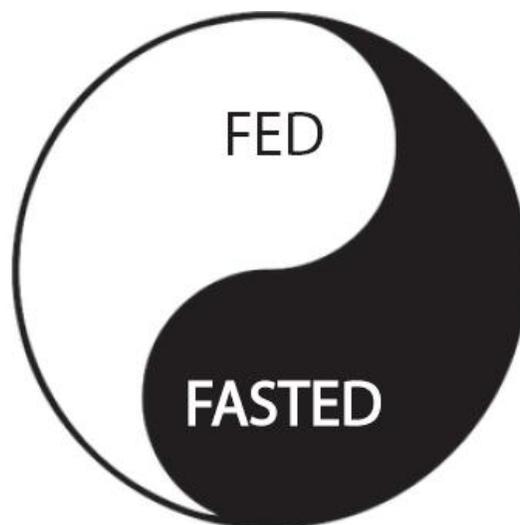
The Disappearance of the Fasted State

The Disappearance of the Fasted State

As I stated in the beginning of this book, nutritionally speaking the human being can only be fed or fasted. By saying this, I mean that we are 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 stored when food is scarce. These are our only two options. Consider them the Yin and Yang of nutrition and health.

- 1) Eating and storing calories
- 2) 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. The problem is that recent research suggests that we spend as much as 20 hours a day in the fed state³. 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.

Because we were meant to be in a constant cycle of feeding and fasting, our bodies are designed to store fat when we over eat, so we can burn it later, when we have no choice but to under eat.

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. This is how our bodies were designed to function.

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

I think it is because the whole 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, the idea of people eating less is bad for business!

Consider this; each day in the United States, the food industry produces enough food to supply every single person with almost 4000 Calories⁴. On top of that, 10 billion dollars per year goes into advertising this food⁵. 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.

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 (It's the most important meal of the day). Eat cereal. Eat high calcium. Eat whole wheat. Take diet pills.* Whatever the recommendation, it always revolves around us constantly 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 find the synonym '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 that 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 lie⁶.

Now, I’m not willing to go quite as far as Mr. Campos; however, 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 means to this end).

All of this begs 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

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.

Information on fasting and dieting is prevalent in cyberspace, and should be read with extreme caution. Ridiculous statements such as *“fasting deprives your body of nutrients and does nothing to help you modify your dietary habits”*, and *“The weight loss from fasting comes entirely from muscle”* can easily be found on the net. Typically, these statements are followed by more of the same old nutrition mantra *“eat multiple small meals a day”*, eat *“high protein foods every 2-3 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 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 fasting’s effect on your metabolism and muscle, and on fasting’s effect on exercise and performance. 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.

Fasting and your Metabolism

Fasting and your Metabolism

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

If you have read any of today's popular diets, you know that they are all based on this idea. The story they are telling goes like this; if you lower your calories too much, then you will stop losing fat because your body has entered 'starvation mode' and your metabolic rate will slow to a stand-still. This is the nutrition 'gospel'. However, it turns out that this is actually not true.

Let me explain.

Our metabolism 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 2000 Calories. This would be called your basal metabolic rate; 2000 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 to 2100 burnt

calories. Your basal metabolic rate is always 2000, and then any extra energy you expend moving your body (such as exercise) is added to that number.

So in this example, you are going to burn 2000 calories per day no matter what you do. So why are we being told that our metabolism will slow down if we don't 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 metabolism by a very small amount, this is referred to as 'the thermic effect of food'. This increase in metabolism 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 is ridiculous to me. If you eat an additional 25 grams of protein

you would be adding 100 Calories to your diet just so you can burn 10 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.

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

In one study, researchers found that the when they made people fast for 3 days, their metabolic rate did not change⁷. This is 72 hours without food. So much for needing to eat every three hours!

In another study by a different group of researchers, people who fasted every other day for a period of 22 days also had no decrease in their resting metabolic rate⁸.

In addition, 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!

In another interesting study, women who ate half the amount of food that they normally eat for 3 days saw no change in their metabolism either⁹.

In still more studies, there was no change in the metabolic rate of people who skipped breakfast, or people who ate 2 meals a day compared to 7 meals per day^{10,11}.

The bottom line is food has virtually nothing to do with your metabolism. In fact, your metabolism is much more closely tied to your bodyweight. If your weight goes up or down, so does your metabolism. The only other thing that can affect your metabolism (in both the short term and longer term) is exercise and weight loss. 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 gurus and supplement sales people are completely unaware of this scientific fact. This is truly a testament to the amazing marketing that can be found on the internet, and in fitness and nutrition magazines.

This got me thinking; if 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 studies extended to over 6 months and up to a year, these differences tended to even out¹².

I found only one thing to be consistent with all of these diets. That 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'**.

So from what we have seen there is a very large amount of science that supports the use of short term fasting as an excellent way to create a dietary restriction, and seems to be an effective and simple way to lose body fat. And we have also determined it does not have a negative effect on your metabolism, so far so good. But what type of effect does it have on your muscles?

Fasting and Exercise

Fasting and Exercise

Your muscle cells have the ability to store sugar as something called ‘glycogen’. The interesting thing about this process is that your muscles lack the ability to pass this stored sugar back into the blood stream. For example the glycogen stored in your right leg muscles can only be used by your right leg muscles. It cannot be ‘donated’ to your liver or brain or any other part of your body. This basic rule goes for all of your muscles.

During a period of fasting, the systems of your body are relying on fat, and the sugar that is stored in your liver for energy. Your muscles still have their own sugar that they need for exercising. The sugar in your muscles is used up quickly during high intensity exercises like weight training and sprinting.

Research completed back in 1987 found that a three and a half day fast caused minimal impairments in physical performance measures such as isometric strength, anaerobic capacity or aerobic endurance¹³. In other words, they found that a three-day fast had no negative effects on how strongly your muscles can contract, your ability to do short-term high intensity exercises, or your ability to exercise at moderate intensity for a long duration.

This means fasting does not negatively affect anaerobic short-burst exercise such as lifting weights, nor does it have a negative effect on typical ‘cardio’ training.

Another study performed in 1988 found no change in soldiers who were exercising until exhaustion either right after a meal or after fasting for three and half days¹⁴.

From this research we can see that you should be able to work out while fasted and not see any change in your performance.

The only situation where I think there may be a negative effect from fasting is during endurance sports like marathons or Ironman style triathlons, where you are exercising continuously for well over an hour^{15,16}. These types of competitions require the athletes to eat during the actual event in order to maintain performance.

However, it should be noted that the “negative effect” that occurs from fasting before long endurance activity only effects an athlete’s time until exhaustion. So the amount of time an athlete can exercise while fasted before becoming exhausted is less than the amount of time it takes for a fed athlete to become exhausted.

While the amount of time it takes before a fasted athlete becomes exhausted is decreased, it actually has positive effects on these athletes fat burning.

Athletes performing long endurance activity while fasted actually burn more fat than athletes who are fed. So depending on your goals, fasting before endurance exercise may actually be beneficial.

I believe the perceived need to eat before a workout or a strenuous activity is more of a psychological need than it is a physical need. It was Ori Hofmekler, author of *“The Warrior Diet”*, who pointed out that “Predators in the wild only hunt when they are hungry”¹⁷.

Fitness expert Matthew Furey (who often practices short-term fasts) mentioned that back when he was a champion wrestler in college he felt that he was faster, more alert and had better reflexes if he ate less before a meet.¹⁸

So from a psychological perspective, perhaps there may even be a benefit to exercising or competing while fasted.

Fasting and your Muscle Mass

Fasting and your Muscle Mass

The other great myth about dieting and fasting is that you will lose your muscle mass while you diet. This is completely false. Not only does reducing your caloric intake not cause your metabolism to slow down, it also does not result in a loss of your hard-earned muscle.

There is one imperative rule that goes along with this statement: you have to be involved in some sort of resistance exercise, like lifting weights.

While long term caloric restriction on its own can cause you to lose muscle mass (such is the case with hospital patients who are on a low calorie diet and confined to bed rest), the combination of caloric restriction with resistance exercises has been proven to be very effective at preserving your muscle mass.

Research on men and women undertaking a very low calorie diet found that even with a 12 week long diet consisting of only 800 Calories and only 80 grams of protein per day, the people in the study were able to maintain their muscle mass as long as they were exercising with weights three times per week¹⁹.

In another study, men restricted their caloric intake by eating 1,000 Calories less per day than they normally ate for 16 weeks. They took part in a weight

training program 3 days a week and were able to maintain all their muscle mass while losing over 20 pounds of body fat!²⁰

In yet another study, women undertaking a reduced calorie diet for 16 weeks were also able to maintain their muscle mass by training with weights three times per week²¹.

As long as you are using your muscles, they will not waste away during short periods of dieting. From my experience, in the sports supplement industry, I can tell you that drug-free bodybuilders and fitness athletes constantly undergo 16-20 week periods of very low calorie diets, while maintaining all of their muscle mass as they prepare for bodybuilding contests.

Another diet myth busted! So much for the 'starvation mode' or eating 50 grams of protein every couple of hours - the key to muscle mass is resistance exercise; your diet has almost nothing to do with it!

And since your diet has very little to do with your muscle mass, then short periods of fasting definitely won't cause your muscle any harm (as long as you continue to work out regularly).

Note: For additional reading, I highly recommend Craig Ballantyne's www.turbulencetraining.com and John Barban's www.6minutecircuits.com as excellent resources for workout routines and strength training information.

Fasting and Hunger

Fasting and Hunger

The true feeling of real hunger is difficult to explain and I'm not sure many of us have ever really experienced it. We have felt the withdrawal of not being able to eat when we wanted to, but true hunger is reserved for those who have gone weeks without eating, and are not sure when or where their next meal will come from.

Consider this; most people get noticeably hungry if they have gone more than 2 to 3 hours without eating, but during this time, metabolically speaking, they are still in the fed state. This means their bodies are still processing the food they ate at their last meal. In other words, there is still unused energy from their last meal in their system, and they are already feeling hungry enough to eat again. How can this be?

Most likely, this is a learned response to a combination of metabolic, social and environmental cues to eat. Remember how I mentioned that the food industry spends 10 billion dollars per year advertising food? Well, it turns out that this advertising is very effective.

According to Brian Wansink, author of "*Mindless Eating*" we make as many as 200 food related decisions everyday and are subjected to countless food

advertisements²². In my opinion, this is why almost all diets fail. It is virtually impossible for us to always be consciously in control of what we eat and how much we eat. There are just too many environmental factors working against us!

For the most part, I believe that hunger is a learned response. Our desire to eat is determined by a combination of our body's response to the amount of food we have eaten, and our mind's response to all of the environmental factors around us (such as TV commercials and snack food packaging colors, fonts and graphics)

Babies are not born hungry, and often times have to be woken to eat during the first few days of their lives. Gradually, we get used to eating at certain times, or with certain people. We get used to having a certain volume in our stomachs, and we get used to the pleasure of certain foods.

In fact, our constant desire to eat may even be related to a form of addiction. In the best selling diet book, "*The South Beach Diet*", author Dr. Arthur Agatston refers to our love of sugar as our 'Sugar Addiction'²³. He may have been onto something with that statement. According to a recent article in *Scientific American Mind*, by psychiatrist Oliver Grimm, recent research suggests that drug addiction and binge eating are very similar in 'neurobiological terms'²⁴. In other words, the brain reacts to food the same way it would react to a hardcore drug like cocaine.

From my own personal experience with fasting, I can tell you that you do get used to the feeling. It becomes easier to manage as your body gets used to the feeling of having a truly empty stomach.

I'm not certain if this is because you switch from fed to fasted at a quicker rate, or if it is just getting used to having an empty stomach. Whatever the case may be it does get easier. Even when you do feel 'hungry' while fasting, the hunger sensations usually don't last more than a few minutes.

In *"The Warrior Diet"* Ori Himekler states that *"Throughout history, humans have had to contend with hunger, and not just because they were unable to afford food, or suffered from drought and famine. Learning to deal with hunger was also practiced intentionally, to make people tougher and stronger, to better handle life's hardships."* ¹⁷

Friends of mine who have adopted periods of fasting into their lives have reported a sense of 'Freedom' during the day. Often times, periods of fasting have been associated with being more alert, ambitious, competitive and creative. Not only that, but you are no longer having to continuously plan your day around the timing of your next meal.

The Health Benefits of Fasting

The Health Benefits of Fasting

After reviewing all the research I could find on fasting, I was astonished at all the health benefits that fasting offers. Do you remember in the late 1990's when the Mediterranean diet became all the rage? The idea behind the diet was based on research conducted in Crete (Greece). The research suggested that the diet of the Mediterranean region was superior to the North American diet.

On average, the Cretes were healthier than North Americans, with less incidence of cardiovascular and heart disease. Researchers attributed this improved health to a high daily intake of whole grains, fruits, vegetables and olive oil.

That made pretty good sense as these are all accepted 'healthy' foods. However, recent reviews by a group of researchers at University of Crete, School of Medicine suggest that one very important factor was left out of this research. In the Greek Orthodox Christian Church there are some very lengthy fasting recommendations²⁵.

The Orthodox Church specifies a combination of dietary restrictions and fasting for a total of between 180 and 200 days out of every year. While this is by no means conclusive evidence, it did suggest that a very healthy group of people

were not only consuming plentiful amounts of healthy foods, but also took part in routine periods of fasting²⁶.

By the time I had finished my research, I had come to the conclusion that short term (one to three days) intermittent (never in a row) fasting, was not only an effective and easy way to cut calories and thus lose unwanted body fat, but it was also associated with many amazing health benefits.

In dozens of published peer reviewed scientific studies, short-term intermittent fasting has been found to have the following health benefits:

- Decreased body fat & body weight
- Maintenance of skeletal muscle mass
- Decreased blood glucose levels
- Decreased insulin levels & increased insulin sensitivity
- Increased lipolysis & fat oxidation
- Increased Uncoupling Protein 3 mRNA
- Increased norepinephrine & epinephrine levels
- Increased Glucagon levels
- Increased growth hormone levels.

Quite a list I'm sure you will agree. What's even more amazing is that many of the benefits were found after as little as 24 hours of fasting!

From my years of experience in the supplement industry, I can tell you that if you could make a pill with all these claims, you would have a hundred million dollar a year product! These claims are that impressive!

So if fasting can do all of these amazing things, it begs the question – should we all be fasting?

In order to find the answer, let's take a take a closer look at some of these claims.

Decreased Insulin Levels & Increased Insulin Sensitivity

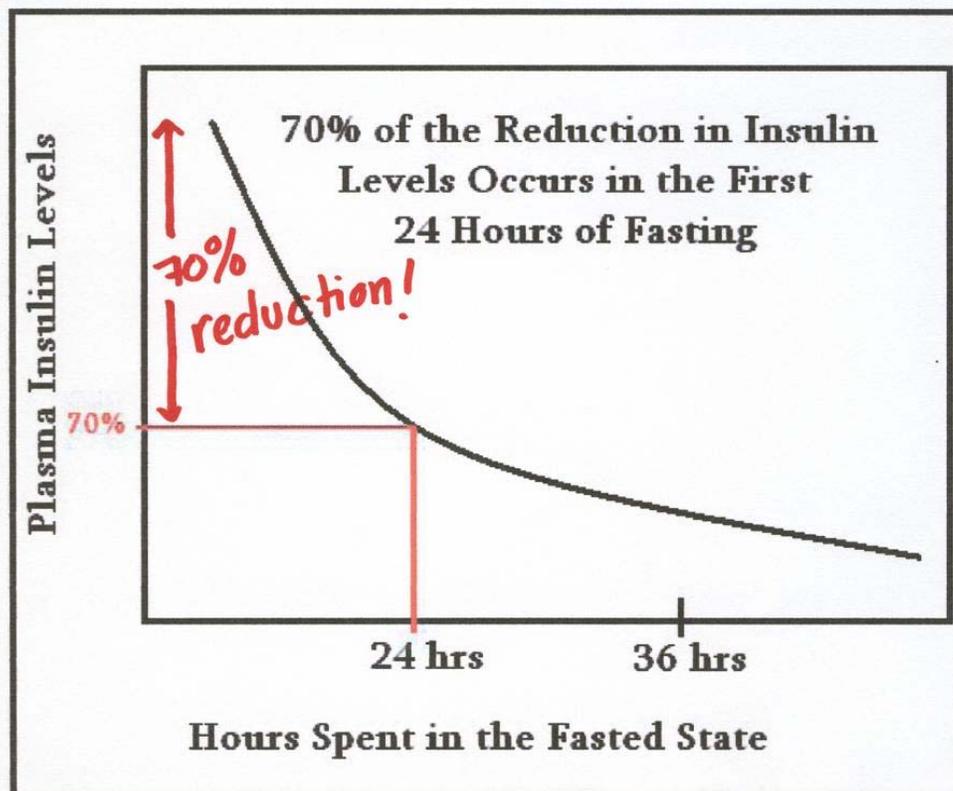
Insulin is one of the most important hormones in your body. Every nutrition, medicine and physiology textbook has at least one chapter devoted entirely to the effects that insulin has on your body.

When you eat, the insulin levels in your body increase. The role of insulin is the storage of nutrients. In other words, insulin is the primary signal that tells your body to store the energy from your food as body fat and glycogen. When insulin levels are high, you are in storage mode, plain and simple. What's more, when insulin is elevated, you are unable to release fat from your fat stores – In other words, when your insulin is high, your fat isn't going anywhere.

Many popular diets, such as *The Zone* and *The South Beach diet*, are based around the idea of controlling your insulin levels. These diets apparently accomplish this by eating small frequent meals that have a low effect on your

blood sugar levels. While eating frequent small meals, or meals with a low 'glycemic index' (a measure of the meal's effect on blood sugar) may help you 'control' or 'even out' your insulin levels, fasting for as little as 24 hours has been shown to drastically reduce your insulin levels!²⁷

In research conducted on people who fasted for 72 hours, plasma insulin dropped dramatically, reaching a level that was less than half of their initial levels. What's even more impressive is that 70% of this reduction happened during the first 24 hours of fasting²⁸.



Increased Lipolysis and Fat Burning

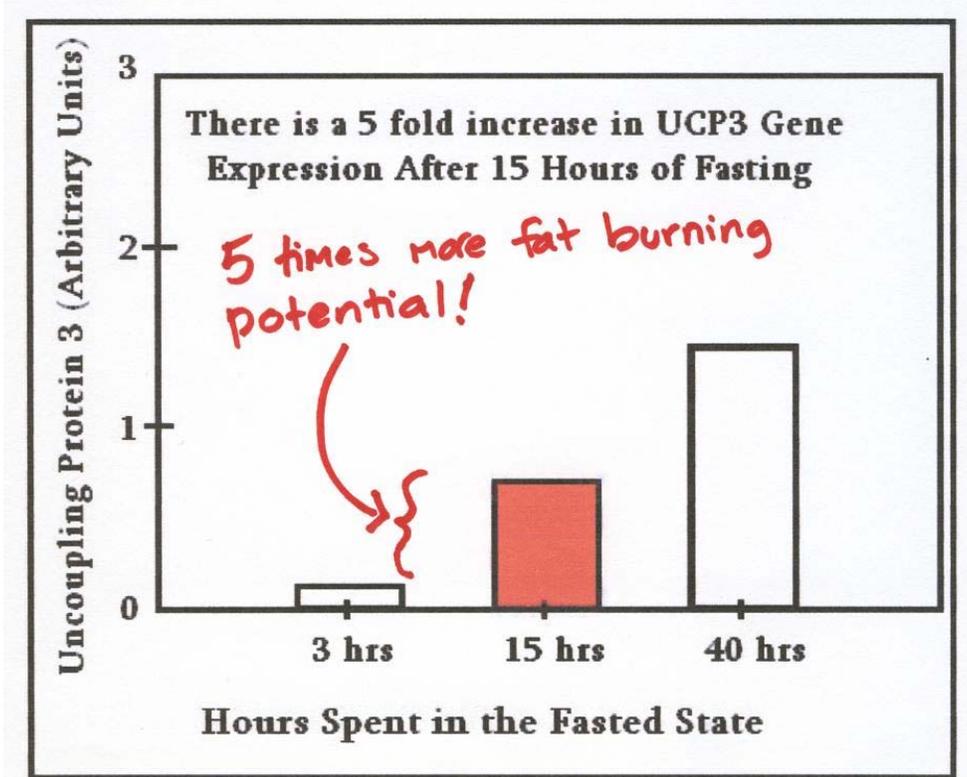
There are a few very important steps in the process of burning fat. First, your fat has to be 'released' from your fat stores. Scientists call this lipolysis, and it involves the process of releasing the fatty acids that make up your fat, and moving these fatty acids into your blood stream.

After a series of steps that allow these fatty acids to get to the mitochondria (the furnace of every cell in your body) these fatty acids go through a process called oxidation. This is the final step of fat burning – Once this has happened your body fat has now been used for energy. It is gone and it cannot come back. Lets review that quickly; fat must be released from its storage spot, transported through your system, and get to a cellular furnace where it will be burned.

While we are resting, our muscles are the major contributor to our metabolic rate. During fasting our muscles start to switch over and start oxidizing fatty acid for fuel. In other words, when we fast, our muscles turn into fat burning machines

Uncoupling Protein-3 is a very important protein found in our muscles that is associated with fat burning. Simply put, when fat burning increases so does the amount of Uncoupling Protein-3 in our muscles.

Amazing research has shown that as little as 15 hours into a fast, the gene expression for Uncoupling Protein-3 increases by 5 fold!²⁹



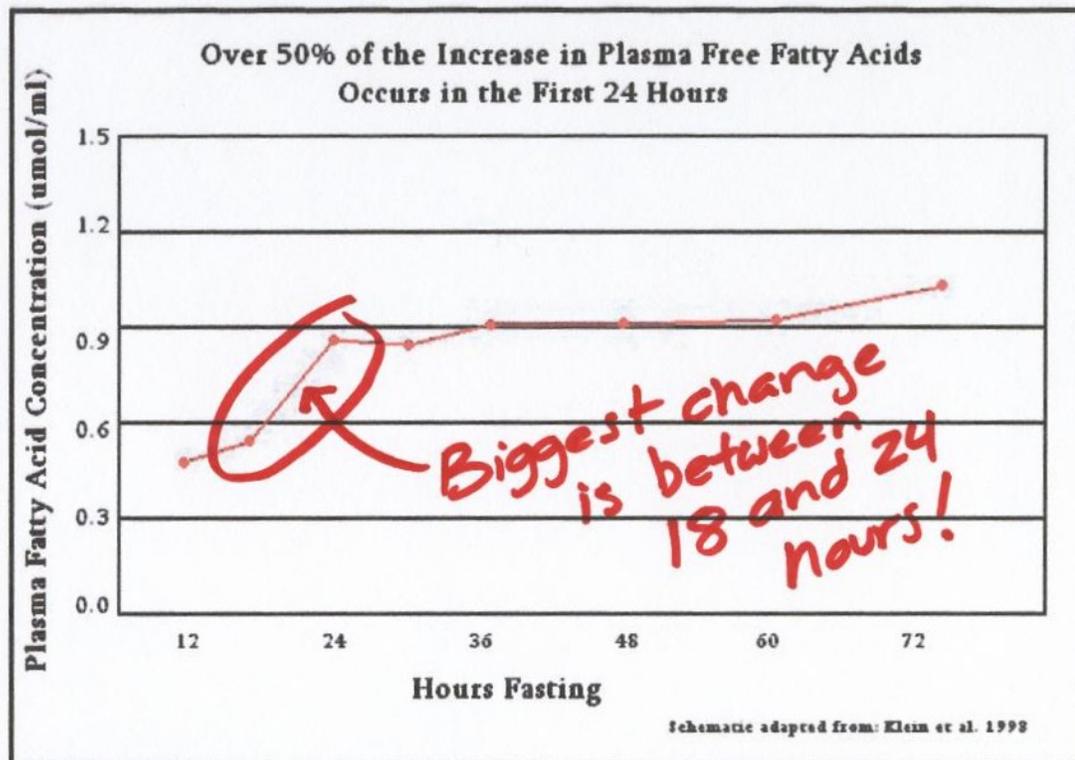
Fat burning is the goal of every diet. You should never lose weight without losing fat. In *“Protein Power”*, Dr. Michael Eades goes so far as to recommend that we should *“Divorce ourselves from the notion that you want to lose weight”* and concentrate on losing fat³⁰.

Luckily, a 24-hour period of fasting shifts your body from the fed state to the fasted state, which causes large increases in both lipolysis (fat release) and fat oxidation (burning). Simply put, fasting allows your body to take a break from storing fat, and start burning it!

Probably the most revealing information in the research I have read was found in studies published by a group of scientists from the University of Texas, Medical Branch at Galveston. It examined how short-term fasting affects fat and sugar metabolism in our bodies.

After only 24 hours of fasting, the amount of fat being released from people's fat stores (lipolysis) and the amount being burnt for fuel (oxidation) had been significantly increased by over 50%.

This is a very significant increase in fat burning.



Increased Glucagon Levels

If we consider fed and fasted to be the yin and yang of metabolism, then the hormonal equivalent to fed and fasted could be thought of as insulin and glucagon.

Insulin is the dominant hormone in the fed state, which causes you to store food calories in the form of fat and glycogen. Glucagon is one of the dominant hormones in the fasted state that causes fat burning.

Quick review:

Insulin = Fat storage

Glucagon = Fat burning

The primary role of glucagon is to maintain your blood sugar levels while you fast. It does this by shifting the body into 'burning' mode.

Glucagon has some amazing effects on our body, including maintaining our blood sugar levels, increasing fat burning, decreasing the production of cholesterol, and increasing the release of extra fluids from the body.

Because of the typical way we eat, we spend almost all of our time in an 'insulin dominant' metabolism (remember Insulin = Fat storage). By adding fasting into your lifestyle, you allow your body to revert back to a natural balance between an 'insulin dominant' metabolism and a 'glucagon dominant' metabolism.

Increased Epinephrine and Norepinephrine levels

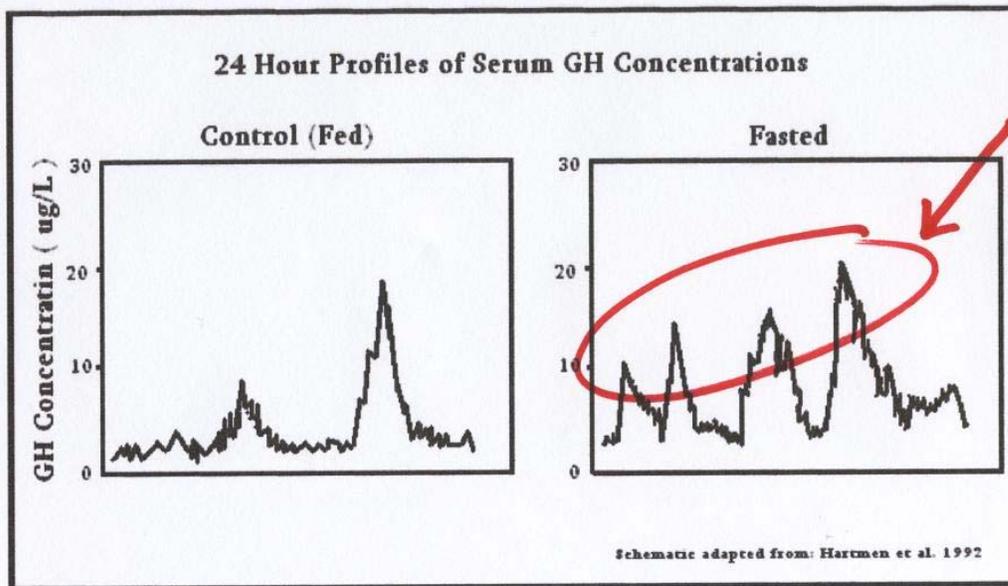
Epinephrine and norepinephrine are both fight or flight hormones, often called adrenalin and noradrenalin. When they are released into the blood stream, they trigger the release of glucose from energy stores, and increase fat burning. They also make you feel awake and alert. Fasting increases the amounts of both of these hormones in your blood. This is your body's way of maintaining your blood sugar levels and increasing your fuel supply by helping to release fatty acids from your fat stores.

Increased Growth Hormone Levels

Growth hormone is getting a lot of press these days. Rumor mills are buzzing that many top-level Hollywood celebrities are taking growth hormone because it helps burn fat, build muscle, and supposedly has 'anti-aging' effects. Many supplement companies are scurrying around trying to find anything that will allow them to say their products can increase growth hormone.

The ironic thing I learned from all this research is that if you want large increases in the amount of growth hormone released in your body, all you have to do is fast. Research has shown that short-term fasting can increase growth hormone levels by nearly six fold^{25, 31}.

That's right, fasting can cause very large increases in the amount of circulating growth hormone. The same growth hormone that celebrities, bodybuilders and fitness models pay thousands of dollars for on the black market, can be easily had for free, just by fasting!



The rumor that taking growth hormone helps burn fat, build muscle and increases metabolism is actually supported by research^{32,33}. However, the amazing connection between growth hormone and fasting has nothing to do with injecting growth hormone.

Fasting triggers the “growth hormone response”, and this response is what prevents you from losing muscle while you fast^{34,35}. And, since your muscle is largely responsible for your metabolism, growth hormone also plays a large part in keeping your metabolism elevated while you are fasting.³⁶

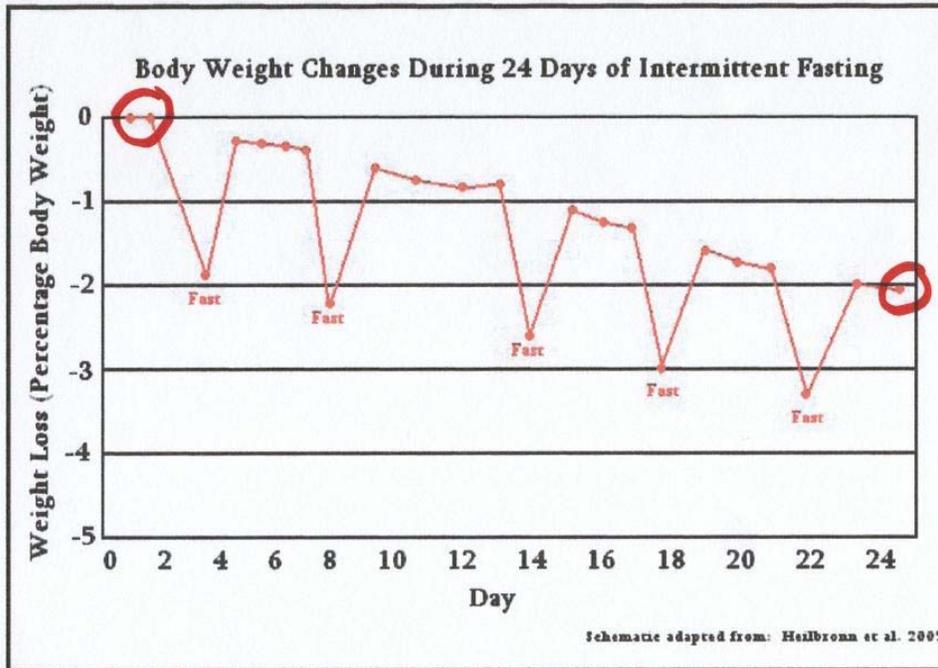
Not only does growth hormone prevent you from losing muscle while you fast, but it is also vitally important in the process of releasing your stored fat so it can be burnt for energy!

This “growth hormone response” to fasting is so important that some researchers have actually argued that in the yin and yang of fed and fasted, it is actually growth hormone and not glucagon that is the dominant hormone in the fasted state because it causes fat burning and preserves your muscle mass³⁷.

Increased Weight Loss and Increased Fat Loss

As you can see, fasting sets you up perfectly for fat loss and weight loss. Metabolically it prepares your body by increasing all of the hormones necessary to increase fat burning. Added to that, it creates a large energy deficit, so your body has no choice but to start burning fat for energy.

Research shows that you will lose 2-3 pounds every time you fast⁸. THIS IS NOT ALL FAT. Much of this is extra body water being lost (insulin causes you to store extra water, so when insulin is low, you tend to lose water). You are also losing fat, but it's a slow and steady process. Most diets see a loss of one to two pounds of fat per week. Adding short term fasting into your lifestyle will have the same effect (just without the dieting)



2% reduction in bodyweight after 24 days!

People in studies who have used short-term fasting as a weight loss method managed to lose more weight in a ten-week period than people on a very low calorie diet.

Even more impressive is that the people who used fasting as a method of weight control maintained most of their weight loss over the course of an entire year. This is very different from the people who were on low calorie and very low calorie diets, who tended to regain all of their weight loss one year after their initial diet³⁸.

Health Benefits – The Conclusion

As you can see, for the vast majority of us, the answer to the question, “Should we all be fasting?” is a resounding YES!

For healthy people wanting a simple and effective way to lose weight, the combination of short-term fasting and exercise is an easy way to create a caloric deficit and has no negative impact on our metabolism or our muscle. Fasting for 24 hours, once or twice a week may be the easiest way to decrease your calorie intake by 20-30%, without having to sacrifice and restrict what you eat. It’s like getting the benefits of an entire week of strict dieting, while only sacrificing for one or two days.

So with fasting we can create prolonged dietary **restriction (the only proven nutritional method of weight loss)** while only sacrificing one or two 24 hour periods in a week, allowing us to reset the **balance between fed and fasted.**

The best part of these findings is that since many of the health benefits from fasting occur in the first 24 hours; we can fast for short periods of time and **NEVER GO A DAY WITHOUT EATING!**

The Eat Stop Eat Way of Life

The Eat Stop Eat Way of Life

It is important to note right away that I do not consider this a diet program. There are no phases, no point systems, no weighing foods, no foods that are ever off limits. I'm not going to tell you that sugar is the cause of our obesity problem, because it's not. Neither is fat. The cause of our obesity problem is that we are failing to realize that we're looking for the answer in the wrong place. Obesity isn't created by one specific macronutrient in our diet. In fact, it's not the diet at all. In my opinion, the number one cause of our obesity epidemic is profit. As long as people profit from us eating, they will always find a way to make us eat. From my experiences, profits are the cause of our weight problems, food is just the tool. Just think if you owned a large food company, wouldn't you want everyone to eat as much of your food products as possible?

This is why Eat Stop Eat isn't a diet; it is a lifestyle based on the nutritional custom of including short-term intermittent fasting into your life. Basically, it's a way of life where you accept the idea of taking small 24 hour breaks from eating, and taking part in resistance exercises (working out with weights) at least 3 times a week.

That's it. The Eat Stop Eat lifestyle in a nutshell is a 24 hour fast once or twice a week, and a commitment to a workout routine. All my research has led me to

the conclusion that this is the single best way to lose weight, to maintain muscle, and to reap all the amazing health benefits associated with fasting.

The reason I don't consider this a diet is because unlike all popular diets, the Eat Stop Eat lifestyle is a sustainable addition to the way we eat for the rest of our lives.

It is the easiest way to lose fat, feel fit and maintain a lean body, as it does not require any difficult nutritional planning. It does not require special shopping trips, exotic foods or expensive supplements. It simply asks you to refrain from eating ideally for two 24 hour periods every week.

Best of all, you never go a day without eating!

How to Fast

In order to fast for 24 hours, you can simply eat as you normally would until 6 pm on day one, and then fast until 6 pm the following day. As an example, you could start your fast on Monday at 6 pm and finish your fast on Tuesday at 6 pm. By fasting in this manner you manage to eat every day, however you also manage to take a 24 hour break from eating. More importantly, you break the horrible habit of constantly being in the fed state and thereby resetting your metabolic balance between being fed and fasted.

You can also adjust this for your own personal lifestyle. If 6 pm to 6 pm doesn't work for you, try going 2 pm to 2 pm instead. The Eat Stop Eat lifestyle is very flexible. If you were planning on starting your fast on Tuesday, but something came up and you had to go to dinner with friends, don't fret, you can simply start the fast the next day.

If you are sick, or aren't feeling well, then you don't have to fast. It's a flexible long-term solution. On some weeks you may fast once, others twice. It's all up to you and your personal preferences. Just do what works for you!

During the times when you are eating, simply maintain the caloric intake that you **normally** eat, while trying to obey what I like to call 'the golden rule of eating':

"Eat less, but enjoy the foods you eat. Eat lots of fruits and vegetables, and lots of herbs and spices. And maybe most importantly, spend less time stressing over the types of food you are eating."

Pay special attention to that last sentence. All of the posturing and positioning by nutrition experts, and all of the scientists touting their research studies and their 'so called' conclusions are all based on the assumption that we are eating continuously every day.

If you start living the Eat Stop Eat lifestyle, all of this becomes a moot point. We can reap the benefits of a low calorie diet, and the benefits of short term fasting,

while eating in a way that is sustainable and enjoyable, just by adding in one or two 24-hour fasts into our week.

With as little as two fasting periods added into your week, you can create the equivalent of a 25% reduction in calories (it's actually 30%, but I factored in a 5% slip up). For a person eating 2,500 calories per day, that's the equivalent of reducing your calorie intake to 1,875 every day of the week! That's a 625 calorie drop, every day!

625 calories is the equivalent of removing an entire cheeseburger with a side order of fries from your diet, EVERY DAY!

The key to making Eat Stop Eat work for you is self-control. After you have completed your fast, it is important that you go back to eating as you normally would. Remind yourself that you do not need to reward yourself with extra-large helpings or extra desserts. The purpose of the fast is to add breaks to your *normal eating routine*.

The minute your fast is over, simply eat as you normally would. Again, no extra rewards, no giant portions, simply return to exactly the way you would normally eat.

I think this is a fair trade. While most diet programs ask you to give up certain foods, all I'm asking you to do is keep eating the way you normally eat. If you want to improve your nutrition while living the Eat Stop Eat lifestyle, go ahead.

Nothing but good things will happen if you incorporate more fruits and vegetables into your diet and cut back on the sugar, but do whatever is within your comfort zone. I believe the biggest health benefits will come from the fast, but all positive changes will help.

Here's another amazing benefit of the Eat Stop Eat lifestyle; research has shown that even if you were to gorge yourself on your eating days, to the point where you don't lose any weight at all, you will still see some of the health benefits associated with fasting³⁹.

With the Eat Stop Eat lifestyle, not only can you lose weight, but the research suggests that you can also improve important markers of health, such as your insulin sensitivity.

Living the Eat Stop Eat lifestyle is the simplest way to improve your health, without massively restricting the foods you are allowed to eat.

What to do while Fasting

Since this isn't a diet, it would be a waste for me to fill two hundred pages with recipes, food combining instructions or calorie and protein charts.

Doing this would be a complete waste of my writing time, and your time for reading it. Instead, the best thing I can do is give you some tips to help make the fast a little easier.

The number one thing you need to remember to do is to drink a lot of fluids; this will help you avoid getting thirsty, which is often mistaken as hunger.

First, in the morning start your day with a large glass of water. Black coffee and tea are also allowed during a fast. You may also find diet colas useful, and don't worry about artificial sweeteners during your fast, in my opinion the health benefits of fasting far out weigh any worry about the intake of artificial sweeteners. Of course, this is your personal decision.

You may also find it helpful to stay busy while fasting. John Barban, Varsity Strength Coach and author of www.womensworkout.blogspot.com and www.6minutecircuits.com has been experimenting with fasting for the last 6 months. Recently he told me that, "fasting is easiest when I'm busy. I think if people's lives were a little more exciting they wouldn't need to eat so much to get some joy out of their day." This statement is very true.

Food is a form of 'bio-feedback'. It is a form of stimulus in our every day lives. So when parts of our days are lacking excitement or stimulation (like when we are sitting in a car stuck in rush hour traffic), we search out stimulation in the form of foods and snacks.

Have you ever had a really boring day at work? Did you ever notice how often you snacked, or made coffee? This is because you are replacing mental stimulation with food stimulation.

A little complex, but it's the short answer to why we should stay busy while fasting.

Other than staying busy, you can go about your day as if it was any other day. You can go to work, go shopping, go workout. Whatever it is you normally do in a day.

This is the beauty of the Eat Stop Eat lifestyle. It is the simplest way to lose fat, improve your health and well-being, without drastically changing the way you live.

Eat Stop Eat Conclusions

Eat Stop Eat Conclusions

By now I hope it's apparent that short periods of intermittent fasting, combined with a regular resistance training program (lifting weights) is an easy and highly effective way to lose weight. It can also help correct some of the negative metabolic effects that come from spending so much time in the fed state.

While many diets tout plans, cookbooks and charts of acceptable and unacceptable foods, none of this is needed when you adopt the Eat Stop Eat lifestyle.

I still recommend eating a variety of fruits and vegetables combined with lean protein, but I emphasize that in the Eat Stop Eat lifestyle, you do not have to stress over what you choose to eat.

From this point forward, you can enjoy the foods you eat, and enjoy knowing that with the Eat Stop Eat lifestyle you can lose fat, build muscle, eat every day and not have to follow some crazy fad diet ever again.

Eat Stop Eat FAQ'S

Eat Stop Eat FAQ'S

Q: I want to lose fat and gain some muscle. I've been told that I need to eat large amounts of protein everyday to put on muscle mass. Won't fasting cause me to lose muscle?

No, as long as you are working out with strength training exercises you will not lose muscle. In fact, it is possible to gain muscle during Eat Stop Eat.

Q: I've been trying the Eat Stop Eat lifestyle for several weeks now, but occasionally I get headaches when I'm fasting, what gives?

There has been a lot of research on Ramadan fasting and headaches. It seems that women are particularly susceptible to headaches while fasting. This is not due to dehydration^{40,41}, and may actually be similar to withdrawal symptoms, similar to the headaches you get when you quit drinking coffee cold turkey. From my experience, if you experience headaches they do tend to go away after your first couple of fasts.

Q: I'm really enjoying adding fasting into my eating plan, but I'd still like to clean up the way I eat when I'm not fasting, any tips?

You can incorporate any diet style you like while you are following Eat Stop Eat. My personal opinion is that the general rules of eating 'lean and green' with lots of fruits, vegetables, herbs and spices is an ideal compliment to the Eat Stop Eat lifestyle, but you can incorporate any diet style you wish.

Q: What are things I can do other than fasting to help me lose fat?

My recommendation would be to use interval training in your exercise program and to follow a solid, well-designed fat loss workout plan.

Q: If I start the Eat Stop Eat Lifestyle, how fast will I lose weight?

It is a dietary truism that you can't take off in a day what you put on over years. With the Eat stop Eat lifestyle, you should be able to lose weight at a rate of 1-2 pounds per week.

Q: Do I need to take a multi-vitamin on the days that I am fasting?

No, a multi-vitamin is generally not necessary if you are eating a balanced diet. However, if you like taking multi-vitamins then by all means, continue to do so, they will not negatively affect the health benefits of fasting.

Q: I read that any weight loss from fasting is only water and muscle, not fat, and you regain the weight when you start eating again. Is this true?

This is not true. During the actual period of time when you are fasting your weight will be lower than normal. This is due to the fact that you have no food in your system, and your body has shed some excess water. However, with several periods of fasting, the weight loss you see is very real and it is indeed fat loss.

Q: I've heard that under-eating will slow my metabolism down and put me in "starvation mode" which will cause me to store more fat. Will this happen with the Eat Stop Eat lifestyle?

No. On the Eat Stop Eat lifestyle you never go a day without food, and you spend most of your days eating your regular diet without changing anything. Your daily calories will only be lower on the days you start and finish your fast. The overall effect should come out to about a 15-25% calorie reduction over the entire week with no negative effects on your metabolism.

Q: Are there any specific supplements I should take while I am fasting?

If you have been asked by a qualified health care professional to take a certain supplement, then please continue to do so. However, I do not believe there is any need for extra or special supplements during your fast

Q: I've heard that short periods of fasting similar to the Eat Stop Eat lifestyle are being studied in animals. I've read it can increase their life expectancy. Is this true?

Yes. As a matter of fact this research is being done by Dr. Mark Mattson at the National Institute on Aging. Research suggests that animals age slower and live longer when they consume less calories. The research is showing that this effect can be achieved by eating less each day, or by fasting on intermittent days⁴².

Q: Why do I have to fast for 24 hours? Couldn't I just do 18 hours, or 36 if I wanted more results?

The answer is two fold. First: According to the research, the 24-hour point is right in the middle of the maximum adaptation for fat burning. Second: Through trial and error, I as well as many of the initial test subjects on the Eat Stop Eat lifestyle, found that 24 hours was the least intrusive to their daily lifestyle. A 24 hour period made the most sense from a practical and scientific stand point.

Note: In actuality you're body begins to burn significantly more fat after approximately the 18 hour mark. This effect begin to level off after 30 hours. If you don't quite make it to the 24 hour point some days don't sweat it, you're still getting a benefit.

Q: I heard breakfast is the most important meal of the day. Will it affect me if I miss breakfast on a fast day?

There is no scientific evidence to prove that breakfast is any more important than lunch or dinner for adults. As a matter of fact there is no scientific evidence proving three meals per day are any better than one.

Q: Can I follow the Eat Stop Eat Lifestyle if I am pregnant?

No. Eat Stop Eat should not be used by anyone who is pregnant or trying to get pregnant. After your pregnancy, consult your physician to see if Eat Stop Eat is suitable for you and your individual circumstances

Q: I know that black coffee, diet pop and water are fine during my fasting periods, but what about sugar-free gum?

I have used sugar-free gum during my fasts. Most of these products contain 2-3 Calories per piece, so I consider a couple of pieces of gum to be acceptable during a fast.

Q: I know you say that fasting releases norepinephrine and epinephrine, and that this should make me feel alert, but for me this doesn't happen. In fact, I sometimes get headaches and feel anxious after fasting. I can even feel this way only 2-3 hours after eating. What gives?

There is a growing body of research that suggests that many people may be addicted to sugar, and that sugar can have psychoactive attributes similar to many drugs⁴³. Your headaches and anxiety may be a result of sugar withdrawal. From my experience, after a couple more fasting sessions these feelings should disappear.

Q: I'm a bodybuilder and I'm interested in trying fasting. Can I still take any of my supplements on the fasting day (I'm trying to gain muscle)?

Lucky for you, the one supplement that is proven to increase strength and muscle mass in the long term is creatine monohydrate. And, since creatine is not metabolized for energy and does not raise insulin levels, taking creatine on your fasting days is perfectly acceptable (However, I would still advice taking your creatine at the times when you are eating).

Q: My Dad is really interested in Eat Stop Eat, but he is diabetic, can he still try the Eat Stop Eat lifestyle?

Eat Stop Eat was designed for healthy people trying to lose weight. If your father wants to try Eat Stop Eat, he should only do so under the direct supervision of a doctor or healthcare practitioner.

Q: In the beginning of Eat Stop Eat you say that it can improve your health and “might just save your life”, these are some pretty bold statements, what gives?

Right now there is on going research on short-term fasting and its ability to improve certain markers of health. While it would be premature of me to say that fasting can help with a medical condition, I can say that it has been used with success in clinical research on people who suffer from asthma⁴⁴, and has been shown to lower inflammation⁴⁵ and is being studied for its potential to improve brain health⁴⁶.

Q: My daughter is 14 and overweight, can she try the Eat Stop Eat lifestyle?

Unfortunately, no, she cannot. All of the research conducted on fasting is done on adults; there is no way for me to know its effects on children. I only recommend Eat Stop Eat for healthy adults.

Q: With all the news about sugar being bad for you, shouldn't I be cutting down on the amount of sugar I eat if I want to lose weight?

You should, and you are. Think of it this way, If you are very diligent and watch the foods you eat day in and day out, skip desserts, and avoid many of the high sugar foods you normally eat, you might be able to reduce your sugar intake by 30%.

Alternatively, you could keep eating the way you normally eat, and fast for two 24-hour periods over the course of a week, and still reduce your sugar intake by 30%. By fasting for two days out of 7, you automatically reduce your sugar intake by about 30%, just by missing two 24 hour periods of eating. The Eat Stop Eat lifestyle is a great way to get the exact same result as a restrictive diet WITHOUT spending day after day monitoring every piece of food you put into your mouth.

Q: I've read that high protein diets can help with weight loss. Can I eat high-protein while doing Eat Stop Eat?

Of course. There are several research studies out there that suggest that a higher amount of dietary protein might be associated with an increased rate of weight loss (As long as the diet is calorie reduced). Most of the research I have reviewed have had people eat between 100 and 150 grams of protein per day (not the crazy 250 gram per diets you read about in fitness magazines). If you like you can definitely try eating a higher protein diet while using Eat Stop Eat.

Eat Stop Eat References

Eat Stop Eat References

-
- ¹ Marion Nestle. *What to Eat*. New York, New York: North Point Press 2006 (For more information visit www.whattoeatbook.com)
- ² Personal Blog of Dr. Michael R. Eades. Version Current April 5th 2007. Internet: <http://www.proteinpower.com/drmike/> (Accessed April 7th, 2007).
- ³ University of Guelph, Unpublished Research, in Review.
- ⁴ Marion Nestle. *Food politics*. Los Angeles, California: Univeristy of California Press. 2003
- ⁵ Brian Wansink. *Marketing Food*. Champaign, Illinois: University of Illinois Press. 2005
- ⁶ Paul Campos. *The Obesity Myth*. New York, New York: Gotham Books. 2004
- ⁷ Webber J, Macdonald IA, The cardiovascular, metabolic and hormonal changes accompanying acute starvation in men and women. *British journal of nutrition* 1994; 71:437-447.
- ⁸ Heilbronn LK, et al. Alternate-day fasting in nonobese subjects: effects on body weight, body composition, and energy metabolism. *American Journal of Clinical Nutrition* 2005; 81:69-73
- ⁹ Keim NL, Horn WF. Restrained eating behavior and the metabolic response to dietary energy restriction in women. *Obesity research* 2004; 12:141-149.
- ¹⁰ Verboeket-Van De Venne WPHG, et al. Effect of the pattern of food intake on human energy metabolism. *British Journal of Nutrition* 1993; 70:103-115
- ¹¹ Bellisle F, et al. Meal Frequency and energy balance. *British Journal of Nutrition* 1997; 77: (Suppl. 1) s57-s70
- ¹² Gardner CD, et al. Comparison of the Atkins, Zone, Ornish, and LEARN diets on change in weight and related risk factors among overweight premenopausal women. *The A to Z weight loss study: A randomized trial*. *Journal of the American Medical Association* March 7, 2007; 297(9): 969-998
- ¹³ Knapik JJ, Jones BH, Meredith C, Evans WJ. Influence of a 3.5 day fast on physical performance. *European Journal of Applied Physiology and Occupational Physiology* 1987; 56(4):428-32
- ¹⁴ Knapik JJ, Meredith CN, Jones LS, Young VR, Evans WJ. Influence of fasting on carbohydrate and fat metabolism during rest and exercise in men. *Journal of Applied Physiology* 1998; 64(5): 1923-1929
- ¹⁵ Nieman DC, et al. Running endurance in 27-h-fasted humans. *Journal of Applied Physiology* 1987; 63(6):2502-2509

-
- ¹⁶ Zinker BA, Britz K, Brooks GA. Effects of a 36-hour fast on human endurance and substrate utilization. *Journal Applied Physiology* 1990; 69(5): 1849-1855
- ¹⁷ Ori Hoefmaker. *The Warrior Diet. How to take advantage of undereating and overeating.* St. Paul, Minnesota: Dragon Door Publications, Inc. 2003
- ¹⁸ Matthew Furey. *Mathew Furey's Maximum Health & Fitness.* June 2007
- ¹⁹ Bryner RW. Effects of resistance training vs. Aerobic training combined with an 800 calorie liquid diet on lean body mass and resting metabolic rate. *Journal of the American College of Nutrition* 1999; 18(1): 115-121
- ²⁰ Rice B, Janssen I, Hudson, R, Ross R. Effects of aerobic or resistance exercise and/or diet on glucose tolerance and plasma insulin levels in obese men. *Diabetes Care* 1999; 22: 684-691
- ²¹ Janssen I, et al. Effects of an energy-restrictive diet with or without exercise on abdominal fat, intermuscular fat, and metabolic risk factors in obese women. *Diabetes Care* 2002; 25:431-438
- ²² Brian Wansink. *Mindless Eating.* New York, New York: Bantam Dell (A division of Random House, Inc.) 2006
- ²³ Agatson, Arthur. *The South Beach Diet.* New York, New York: Rodale Inc. 2003
- ²⁴ Grimm O. Addicted to food. *Scientific American Mind* 2007; 18(2):36-39
- ²⁵ Sarri KO, et al. Greek orthodox fasting rituals: a hidden characteristic of the Mediterranean diet of Crete. *British Journal of Nutrition* (2004), 92, 277-284
- ²⁶ Sarri KO, et al. Effects of greek orthodox christian church fasting on serum lipids and obesity. *BMC Public Health* 2003; 3: 3-16
- ²⁷ Halberg N, et al. Effect of intermittent fasting and refeeding on insulin action in healthy men. *Journal of Applied Physiology* 2005; 99:2128-2136
- ²⁸ Klein S, et al. Progressive Alterations in lipid and glucose metabolism during short-term fasting in young adult men. *American Journal of Physiology* 1993; 265 (Endocrinology and metabolism 28):E801-E806
- ²⁹ Tunstall RJ, et al. Fasting activates the gene expression of UCP3 independent of genes necessary for lipid transport and oxidation in skeletal muscle. *Biochemical and Biophysical Research Communications* 2002; 294:301-308
- ³⁰ Micheal R. Eades and Mary Dan Eades. *Protein Power.* New York, New York: Bantam Books (a division of Random House, Inc.) 1999
- ³¹ Hartman ML, et al. Augmented growth hormone (GH) secretory burst frequency and amplitude mediate enhanced GH secretion during a two-day fast in normal men. *Journal of Clinical Endocrinology and Metabolism* 1992; 74(4):757-765
- ³² Norrelund H. Modulation of basal glucose metabolism and insulin sensitivity by growth hormone and free fatty acids during short-term fasting. *European Journal of Endocrinology* 2004; 150: 779-787

-
- ³³ Hansen M, et al. Effects of 2 wk of GH administration on 24-h indirect calorimetry in young, healthy, lean men. *American Journal of Physiology Endocrinology and Metabolism* 2005; 289: E1030-E1038
- ³⁴ Norrelund H. The protein-retaining effects of growth hormone during fasting involve inhibition of muscle-protein breakdown. *Diabetes* 2001;50:96-104
- ³⁵ Norrelund H, Rils AL, Moller N. Effects of GH on protein metabolism during dietary restriction in man. *Growth hormone & IGF Research* 2002; 12: 198-207
- ³⁶ Norrelund H. Abstracts of Ph.D. Dissertations – Effects of growth hormone on protein metabolism during dietary restriction. *Studies in Normal, GH-Deficient and Obese Subjects. Danish Medical Bulletin* 200; 47 (5): 370
- ³⁷ Rabinowitz D, Zierler KL. A metabolic regulating device based on the actions of growth hormone and of insulin singly and together in the human forearm 1963. *Nature*; 199: 913-915.
- ³⁸ Johnstone, AM. Fasting – the ultimate diet? *Obesity Reviews* 2007; 8(3): 211-222
- ³⁹ Halberg N, Henriksen M, Soderhamn N, et al. Effect of intermittent fasting and refeeding on insulin action healthy men. *Journal of Applied Physiology* 2005; 99:2128-2136
- ⁴⁰ Mosek A, Korczyn AD. Fasting headache, weight loss, and dehydration. *Headache* 1999; 29: 225-227
- ⁴¹ Dresner MJ, Elstein Y. Prophylactic COX 2 inhibitor: An end to the yom kippur headache. *Headache* 2006; 26: 1487-1491
- ⁴² Mattson MP, Duan w, Guo Z. Meal size and frequency affect neuronal plasticity and vulnerability to disease: cellular and molecular mechanisms. *Journal of Neurochemistry* 2003; 84(3): 417-431
- ⁴³ Avena NM, Rada P, Hoebel BG. Evidence for sugar addiction: Behavioral and neurochemical effects of intermittent, excessive sugar intake. *Neuroscience and Biobehavioral Reviews* 2007; 18: 3-20
- ⁴⁴ Johnson JB, Summer W, Cutler RG et al. Alternate day calorie restriction improves clinical findings and reduces markers of oxidative stress and inflammation in overweight adults with moderate asthma. *Free Radical Biology & Medicine* 2007; 42: 665-674
- ⁴⁵ Aksungar FB, Topkaya AE, Akyildiz M. Interlukin-6, C-reactive protein and biochemical parameters during prolonged intermittent fasting. *Annals of Nutrition and Metabolism* 2007; 51:88-95
- ⁴⁶ Martin B, Mattson MP, Maudsley S. Caloric Restriction and intermittent fasting: Two potential diets for successful brain aging. *Ageing Research Reviews* 2006; 5: 332-353.