

Dr. Dennis Clark's

***Belly
Fat
Book***

5 Steps to a Slimmer and Healthier You

Dr. Dennis Clark, PhD
BellyFatScience.com

Belly Fat Book: 5 Steps to a Slimmer and Healthier You

© 2012 Dennis Clark, Tempe, AZ

Please feel free to pass this report on to anyone who might be interested in reading it, with the following two conditions: 1) don't charge anything for it; and, 2) keep it unchanged in every respect - not a word is to be changed, even if I misspelled something or said something stupid.

DISCLAIMER

The FDA mandates that I offer the disclaimer that nothing in this report is worth a hoot regarding human health, or something like that. The wording is supposed to be that this report contains nothing that is meant to diagnose or treat any medical condition and that you should see a doctor. Good luck with that.

PLEASE NOTE:

If you have ever been tempted to take any kind of diet pills, it is crucial that you know about their benefits, documented research results, and side effects before you decide what to do. This is a sufficiently important topic by itself that I have recently launched a separate blog on it: TheDietPillsReview.com. Little by little, I am reviewing FDA-approved prescription drugs (most of which should be avoided) as well as supplements (some of which are valuable, others of which are outright scams). I strongly encourage you to read my information.

As always, please leave comments or questions at the end of any post. Let me know what kinds of diet pills you would like to know about, if I haven't covered them already. Thanks!

TABLE OF CONTENTS

INTRODUCTION	5
STEP 1. EATING TO BURN FAT	6
What to Eat	6
Common Sense on Fat Burning Foods	6
Top Recommended Foods	7
What About Carbohydrates?	7
When to Eat for Optimum Fat Burning: Spacing Meals for Optimal Benefit ..	8
Too Hard to Make It 5-6 Hours Between Meals?	9
Importance of Not Eating After Dinner	10
What About Those Popular 5-6 Meals Per Day Plans from Fitness Trainers? ..	10
Relevant Scientific Research	10
1) The Importance of Breakfast	10
2) Research on How Often to Eat	11
How Much to Eat for Optimum Fat Burning	12
Little Known Truths About Calories	12
Your Metabolic Calorie Impact	12
Protein For Breakfast	13
How Many Calories Do You Need?	14
Putting It All Together	14
How Much Protein?	15
Make It Easy, Use Common Sense	15
STEP 2. FAT BURNING SUPPLEMENTS	17
What About Hormones?	17
Things You Do That Lead To Leptin Resistance	17
What Kinds of Natural Products Burn Fat?	18
1) Metabolic Booster	19
2) Blood Sugar Stabilizer	19
3) Fat Regulator	20
4) Chromium	20
5) Probiotics	20
Fat Burning Value Pack	20
The New Kid on the Block: Irvingia Gabonensis	21
Caution About Supplements	21
STEP 3: EXERCISE	22
When You Exercise Too Much	22
Effective Muscle-Building	22

What About Aerobic Exercise?	23
And the Best Method Is... ..	24
STEP 4. STRESS: THE MOST OVERLOOKED CAUSE OF FAT	25
Stress and a Fat Stomach	25
Cortisol - Leptin's Partner in Managing Stress	25
Can You Really Lose Fat While Sleeping?	26
Supplements for Relaxation and Sleep	26
Melatonin - The Sleep Hormone	27
Magnesium - The Most Common Missing Mineral for Relaxation	27
Recommended Herbal Formula	27
Stress - The Fat Super Glue	28
STEP 5. HORMONE BALANCE FOR FAT LOSS	29
Major Hormones for Fat Loss	29
1) Thyroid Hormones	29
Caution About Thyroid Drugs	30
Natural Alternatives	30
Iodine - The Most Important Mineral That You Do Not Have	30
HUGE Caution About Dieting	31
2) Steroid Hormones and Fat Metabolism	31
Some Important Misconceptions	32
Internal Factors for Estrogen Dominance	32
External Factors for Estrogen Dominance	33
What to Do to Achieve Estrogen Balance - <i>Guys Read This, Too!</i>	33
Challenges of Getting Into Hormone Balance	34
Trickiness of Progesterone Supplementation	34
3) Human Growth Hormone (HGH)	34
What Exactly is HGH?	35
HGH and Body Fat	35
Boosting HGH Levels Naturally	35
Choosing Your Own HGH-Boosting Cocktail	36
Effects of Meal Spacing on HGH	37
CAUTION ABOUT HGH SUPPLEMENTS	37
BONUS STEPS IF YOU ARE <u>REALLY</u> SERIOUS	38
Taking Advantage Of When To Eat	38
Can You Ever Eat What You Really Want Again?	38
FINAL COMMENT	40

INTRODUCTION

One important thought to keep uppermost in your mind is that quick, healthy fat reduction is not possible. Ads about all the diets and so-called weight loss programs that claim miracle weight loss in just a few days are misleading. They generally make you lose water, which is the easiest weight to lose quickly. This is followed by total weight loss that includes muscle as well as fat. This is the fastest way for people to shrink in less than two weeks.

It is crucial to understand that unhealthy weight loss from fad diets causes you to lose muscle mass. The bottom line is, dieting just to get your bathroom scale to change is not necessarily good for you. The key is getting rid of fat.

Healthy fat reduction can be simple and easy when you follow the right guidelines. No single step will work by itself as well as the combination of all of them will. The right eating plan will not suffice by itself, and neither will the right supplements, exercise, stress management, or hormone balance. The steps in this report have been designed to work together for you to get back the slim and healthy body that you once had. Use all of them consistently and you will be totally amazed at how fantastic you will look and feel.

STEP 1. EATING TO BURN FAT

Eating to burn fat the healthiest way possible entails three components: a) the best foods to eat for fat burning; b) the optimum timing for when to eat for maximizing fat metabolism; and, c) how much to eat so you can reach fat reduction goals. In other words, you must pay attention to what, when and how much you eat.

What to Eat

The good news about eating to burn fat is that it doesn't require any of the kinds of sacrifices that typical diet plans do. You can eat well, never suffer from hunger or deprivation, and watch your waste, arms, and thighs shrink down to the size that you want them to be.

Common Sense on Fat Burning Foods

First a little common sense. Eat foods that offer high nutrient density. If you've heard the advice that shopping for food around the perimeter of a supermarket is best for you, then you have a great start on knowing what will help you to burn fat. This just means buying fresh fruits, vegetables, and meats. However, there are some exceptions whereby fresh may not be the best option. One example is in regard to frozen foods, some of which can be better for you than their fresh counterparts. The underlying reason involves when produce is picked and how it is handled between the time of harvest and when it appears at the supermarket.

Fruits and vegetables are often picked before they are ripe, stored cold, and fumigated with ethylene gas to speed up ripening just before they are put on the produce shelf. The result is that they look good and yet have less flavor or nutrition than they should. Your best test for which produce was picked before it was ripe is simply a taste test. Tomatoes are a good example. Supermarket tomatoes are almost entirely flavor-free. That means that they also offer little in the way of nutrition.

Fruits and vegetables that are destined for freezing are allowed to ripen more fully before harvest, thereby providing more nutrient value than their fresh counterparts. The main caution for buying frozen foods, however, is to watch out for additives and hidden empty calories. Frozen peas with lots of salt, preservatives, butter, and extra flavor or color ingredients would not be a good choice. Frozen peas that have only frozen peas, and nothing else, on the ingredient list would be a good choice.

Except for certain frozen fruits and vegetables, packaged food in general is horrible. Just keep this in mind: Companies that make packaged foods have only one purpose – to get you to buy their foods. The brightly colored packaging, artificial flavoring and coloring, excessive amounts of salt and sugar, marketing strategies, and product positioning on the shelf at your eye level are all designed for you to take the item off the shelf and buy it. Notice that not one of these tactics has to do with nutrition or food quality. This is why

packaged foods are generally not helpful for any kind of fat reducing eating plan. And this includes packaged meals for weight loss programs!

Top Recommended Foods

Use your common sense, as stated above, and keep in mind the most important guiding principle for choosing foods that help you reduce fat is nutrient density. Dieticians, naturopaths and other doctors, and trainers, and nutritionists mostly agree that the highest nutrient density comes from several categories of foods: vegetables, fruits, meats, fish, poultry (including eggs), herbs and spices, and seeds and nuts. The best of these are listed below.

VEGETABLES: Arugula, Bell peppers, Broccoli, Cabbage, Carrots, Leeks, Onions, Romaine lettuce, Scallions, Shiitake mushrooms, Spinach, Tomatoes, Sweet potatoes (NOT yams! NOT white potatoes!)

FRUIT: Apples, Blueberries, Cherries, Grapefruit, Oranges, Pomegranates

FISH: Flounder, Salmon, Sole, Tilapia

MEAT AND POULTRY: Beef, Lamb, Pork, Chicken, Turkey,

HERBS AND SPICES: Basil, Black pepper, Cardamom, Chives, Cilantro, Cinnamon, Cloves, Garlic, Ginger, Parsley, Turmeric

NUTS AND SEEDS: (raw, unsalted) Almonds, Flaxseeds, Sesame seeds, Walnuts, Macademia nuts

OTHER: Eggs, esp. the whites

Now imagine this: What kind of delicious meal could you start out your day with by having a breakfast selected from this list? Notice that this list contains no typical breakfast foods. No cereal, no bagels, no sweetened yogurt or low-fat anything, no junk of any kind.

Here is an example of a simple mouth-watering breakfast recipe that I have created and look forward to once or twice per week:

INGREDIENTS: yellow onions, Shiitake mushrooms, and golden bell peppers sliced sautéed in coconut oil; ground turkey

COOKING: stir fry ground turkey with the sautéed onions, mushrooms and bell peppers; add garlic powder and black pepper to taste

I'm usually in a hurry, so this meal gets me going quickly, sticks with me until lunch, and I generally have leftovers as a side dish for the next day.

What About Carbohydrates?

You must have carbs to be healthy. Fortunately, it is nearly impossible to suffer from a carbohydrate deficiency, because our bodies can make carbs from protein and fat. The

subject of dietary carbs, however, has become so controversial that getting the right information takes a lot of luck and persistence. Let me point out a couple of interesting scientific observations that will give you a good perspective on carbohydrates:

Over the past 120 years, every culture worldwide that began incorporating processed carbohydrates into their diet acquired diabetes, cardiovascular disease, and obesity, starting about 20 years after these foods became a part of their diet

Starting in the 1940s the Pima Indians north of the U.S. Mexico border changed their diet from one that traditionally consisted mainly of slow release carbohydrates (e.g, tepary beans, nopal cactus) to one of high levels of processed (fast release) carbohydrates. Now more than 50% of adults over the age of 35 suffer from adult onset diabetes and more than 95% of the population is overweight.

This list could go on for hundreds of examples of the same pattern: processed carbs are the culprit; complex carbs are a valuable component of a balanced diet. You don't really have to get too technical about what this means for you. My favorite saying is simple, "If it's white, don't bite." This includes potatoes, breads, pastas, polished rice, bagels, and white foods that are disguised as something that they are not. Beware, for example, of whole wheat bread and other so-called "whole food" products that contain enriched flour as the main ingredient. The list includes all chips, cookies, cakes, pretzels, and bagels. The number of these kinds of fat-making foods is seemingly endless.

Since you are surrounded by white foods, here is a good rule of thumb for enjoying them with a meal if you must: Just estimate the amount of protein you have in your meal, then eat about the same amount in carbs. The breakfast above, for example, is fine with a slice of toast and maybe some salsa or guacamole or avocado chunks on top. In fact, that is generally what I have with it, which makes it even tastier.

Here is a guarantee: When you start out your day with a high-protein meal, and keep the carb levels at each subsequent meal at about the same amount as the protein level, your body fat percentage will start to come down slowly. You will see and feel it first in your shrinking waist.

When to Eat for Optimum Fat Burning: Spacing Meals for Optimal Benefit

The key timing for eating revolves around hormone balance, specifically insulin and leptin. The pattern is simple: Eat three meals a day; allow 5-6 hours between meals; do not snack; do not eat after dinner; allow 11-12 hours between dinner and breakfast. That's it. Now here's why.

This pattern works for optimizing your metabolism in response to food. The first three hours after you eat, your body produces insulin for refueling muscles and liver. This means that your liver and muscles take on as much glycogen (your body's natural storage sugar) as possible. During this energy storing time, fat loss is not possible. At

about three hours after a meal, insulin levels should be back down to pre-meal levels, whereupon your liver begins to kick into high gear. That is when your liver becomes a powerful metabolic factory for mobilizing glycogen into blood sugar. Blood sugar then feeds the rest of your body as it is converted into fuel in the forms of protein and fat as needed. At that point fats in the blood begin to burn, thereby clearing out stagnant calories that would otherwise go into storage.

The period between meals is an opportunity for the liver to exercise, just like exercise for your muscles. It needs that time to clear out glycogen. If you snack between meals or eat a meal too soon after the previous one, this process is blocked. Blocking your liver's exercise is a fast track to insulin resistance and diabetes. An under-exercised liver synthesizes excess amounts of cholesterol, even if the food you eat contains no cholesterol.

The majority of fat that is broken down between meals is taken up directly by muscles, which underscores the importance of exercise. Well-toned muscles use up more fat between meals much faster than muscles that get no regular exercise. In fact, muscle tone is one of the main pieces in the pancreas-liver-muscle system that provides the balance of energy that you need to keep going all day long. When you eat too soon after a previous meal, you undermine this system, causing insulin levels to rise, fat burning to shut off, and calories to go back into storage. In addition, you will suffer from low energy and cravings. When these things happen, it shows you how out of shape your pancreas-liver-muscle system is.

By the way, a continued pattern of too-frequent eating or snacking leads to pancreas fatigue, insulin resistance, diabetes, and a body that is in permanent fat storage mode. This is why obesity and diabetes are so tightly linked to one another. Estimates are that more than 20 million Americans are already pre-diabetic and don't realize it. However, depending on how far down that path you might have gone already, you can reverse or control some or all of the damage, even if you are diabetic.

Too Hard to Make It 5-6 Hours Between Meals?

Feeling weak or hungry before the next meal may mean that one or more of the following apply to you:

- 1) You didn't eat enough at the previous meal.
- 2) You ate too much carbohydrate at the previous meal.
- 3) Your fitness level is too low.
- 4) Your digestion is poor.
- 5) You have a sluggish and congested liver, with weak adrenals.
- 6) You have an exhausted metabolism and most likely fibromyalgia.
- 7) You already have diabetes.

Importance of Not Eating After Dinner

It is important to allow at least three hours after dinner before bedtime and to avoid after dinner snacks because prime fat-burning time is at night. In fact, during nighttime sleep is the only time you can lose any significant and consistent mass from stored belly fat. However, it only works well when you don't eat for a period of about 11-12 hours.

During the day, most fat burning comes from food or from circulating fat in the blood. The majority of caloric metabolism in daytime comes from readily available supplies, not from storage. By about nine hours after dinner, these supplies are most likely used up, at which time your body will start to dip into storage reserves. During the night, you gradually begin to burn a higher proportion of fat for fuel. Therefore, 9-12 hours after dinner is a premium period for metabolizing stored fat.

After-dinner snacking, a little bit of ice cream for bed, a midnight snack ... all of these will shut off your prime fat-burning time. This is a fact of your normal biochemistry. If you have trouble keeping to this pattern, you either have an underlying health problem or bad habits that you have to overcome, or both.

What About Those Popular 5-6 Meals Per Day Plans from Fitness Trainers?

Many children, young adults, bodybuilders, athletes, and fitness trainers can, without apparent consequences, violate the meal spacing required for optimizing fat burning. This is because their demand for calories to aid growth and body repair is very high. Appropriate meal spacing becomes more important for people after the age of 30 or after intense training stops. In such cases, continued frequent eating will cause a gradual increase in percent body fat. It may show up either as added weight or as loss of muscle in proportion to fat.

Relevant Scientific Research

1) The Importance of Breakfast

Basic results from a recent study on the effect of breakfast on daily energy use show the following: an increased proportion of calories consumed at breakfast was correlated with lower weight gain in 6,764 middle-aged and older men and women (age range 40-75), independent of total calories. In fact, people in the group who consumed the largest proportion of their calories at breakfast gained weight the slowest in spite of consuming more calories overall throughout the day. Two results were of particular importance: 1) the general trend was to gain weight as people aged; 2) those who ate bigger breakfasts gained less weight in spite of eating more throughout the day than those who ate smaller breakfasts. The significant variable here was how many calories at breakfast, and the conclusion was that the right start for optimum metabolism each day is a substantial breakfast. To be as complete as possible, this study also found no influence on this pattern from age, sex, smoking, total energy intake, macronutrient intake, social class, or physical activity. Since this was an observational study and not a weight loss experiment,

no effort was made to modify diets or any other lifestyle factor for managing weight. The normal trend for people to gain weight as they get older was confirmed in this study.

Reference: Energy Intake at Breakfast and Weight Change: Prospective Study of 6,764 Middle-aged Men and Women. In: American Journal of Epidemiology 2008 167(2):188-192. By: L.R. Porslow and 9 co-authors, Institute of Medical Science, Addenbrooke's Hospital, Cambridge, UK.

2) Research on How Often to Eat

This topic has become controversial because of the wide variation of results from different groups of people of different ages and levels of physical activity. The historical recommendation of three square meals per day is supported by the biochemical explanation of what happens to calories over time after a meal. It follows the meal frequency described above for a meal spacing of 5-6 hours and a 12-hour meal-free period between dinner and breakfast. The recommendation of eating six small meals per day, to keep the furnace burning hot, has become dogma in some circles. However, the common advice for frequent meals to keep the body's furnace burning hot makes no sense physiologically or biochemically.

This is a perfect situation for looking at the scientific literature to see what researchers have found. Meal frequency, as it is called, has been a topic of research for more than 40 years. Why so long? The complexity of attributing a single factor, such as when meals are eaten, among several other factors, as the cause of weight loss or gain is difficult to nail down with certainty. Differences among people in any experimental group confound the interpretation of results. For example, a recent Australian study, which is still unpublished, showed that no weight loss advantage could be found for eating five or six snack-type meals per day vs. three full meals, in spite of the biochemical factors that favor fewer meals. Indeed, the results of this experiment failed to show any difference between the six meals per day group vs. the three meals per day group in weight loss, waist measurement, body fat composition, or blood sugar levels.

In spite of the lack of a clear conclusion, which often plagues these kinds of studies, nutrition researchers choose the logic of the biochemistry-based explanation to stick with the recommendation of three meals a day for optimum fat burning. Indeed, Dr. Tim Crowe, a nutrition specialist at Deakin University in Melbourne, described the six meal per day diet as a, "faddish dieting trend," with very little research in support of it. In fact, he noted that there is some research to suggest that playing around with when you eat may actually cause you to put weight on. His bottom line advice is that dieters should be discouraged from making drastic changes to their eating patterns, and keep doing what works for them.

The latest survey revealed that 56 percent of adults eat between two to four times a day, while 37 percent eat five to seven times daily. Even after more than 40 years of research, the jury is still out on which of these groups is gaining weight faster. If you are young and very active, your eating pattern is of less significance than if you are more than 30 years

old and becoming a couch potato. Indeed, even if you fit the latter pattern and seem to stay the same weight, the tendency is to lose muscle mass and gain fat. A 25-year old woman can stay the same weight for another 25 years and yet go from 20% body fat to 30% body fat or more if she doesn't stay active and eat well for burning fat. The three meals per day eating pattern becomes more critical for keeping a low body fat percentage as you age.

How Much to Eat for Optimum Fat Burning

The truth is that you absolutely must eat the right amount of calories to establish your optimum fat burning metabolism. Now that you know which foods are the best and the optimum time to eat your meals, the final component of your eating plan is how much to eat. Keep two things uppermost in your mind: 1) too many calories will make you fat; 2) too few calories will keep in place the fat that you already have. The key is to eat just the right amount, not too much and not too little.

Little Known Truths About Calories

The subject of calories has generated a lot of misconceptions that have led to too much misinformation. To start, an accurate definition of a calorie is: the amount of energy that it takes to heat one cubic centimeter (cc, or milliliter) of water to increase one degree Celsius at room temperature and sea level. Calories, therefore, are a measure of heat, which means that you don't really eat calories, because you don't eat heat.

Calories are measured in a laboratory device called a bomb calorimeter, which measures the heat released by its contents as they burn. Here is how calories are related to food: When 1 gram of a carbohydrate is completely burned up in a bomb calorimeter, it yields 4,000 calories (4 kilocalories or kcals). Food calories, however, are more correctly called Calories, with a capital C, which are equivalent to kcals. This means that 4,000 calories are called 4 Calories when referring to food. (It is less scary to say that you have a 2,000 Calorie per day diet instead of saying 2,000,000 calories!)

Even though you don't eat calories, the amount of food that you eat is measured by the maximum number of calories that it would yield in a bomb calorimeter. This is a very simple-minded and highly inaccurate way to evaluate the impact of food on your metabolism. In the first place, nobody gets the maximum number of calories out of food. The efficiency is most likely about 20% to 30% of calories that you eat are actually useful metabolically. The bulk of your calorie intake is released as heat (that's why you are warm-blooded) or eliminated as the byproducts of metabolism, most commonly as water and carbon dioxide.

Your Metabolic Calorie Impact

Since raw calories are meaningless regarding your metabolism, a more meaningful view is what I call your metabolic calorie impact. Several factors determine what you actually get out of your food. One of the most important factors in determining your metabolic

calorie impact is the net caloric value of food. By this I mean the difference between the energy that you put into your food through digestion versus the energy that you get out of it. Think of this concept in comparison with setting a fire. A piece of paper has potential caloric value that can be released when it is burned.

However, you must light a match to it to get it started. The energy of the match represents the energy of digestion. For example, when you eat carbohydrates or fats, the digestive energy you must put into these food groups is about 10% of what you will get out of them. Protein, on the other hand, requires about three times as much energy from digestion (i.e., 30%) before you can get any calories out of it.

Determining how much food to eat depends on the metabolic calorie impact of your meal based on how much carbohydrate, fat, and protein is in the meal. Based on the digestive energy required for each food group, the maximum potential energy for carbohydrates and fats is about 90%, while the maximum potential for protein is about 70%. If this seems too technical right now, just use the small table below to estimate the potential metabolic calorie impact for each food group:

1 gram of carbohydrate = 4 Calories; 90% of that gives you 3.6 Calories

1 gram of fat = 9 Calories; 90% of that gives you 8.1 Calories

1 gram of protein = 4 calories; 70% of that gives you 2.8 Calories

Now imagine this: if you targeted a 2,000 Calorie per day diet, and you had to choose only one food group, you could eat 500 grams of carbohydrate (a little more than one pound), with a metabolic calorie impact of 1,800 Calories; or 222 grams of fat (just under half a pound), also with a metabolic calorie impact of 1,800 Calories; or 500 grams of protein, with a metabolic calorie impact of 1,400 Calories. The main point here is that each food group has a different metabolic calorie impact. If you think you are consuming the right amount of food for burning fat, without success, then adjusting the proportions of each food group may be the answer. The most common flaw in deciding how much to eat for optimizing fat burning metabolism is consuming too much carbohydrate.

Protein For Breakfast

Protein puts your metabolism to maximum work just to digest it. You've already learned the importance of breakfast to get your day started right, and now you know why it is important to make it a high protein meal. A high protein breakfast gets your metabolism started in the right direction for the entire day. The worst thing you can do to start your day is to have a high carbohydrate breakfast derived from white foods - bread, junk cereals, bagels, donuts, adulterated fruit juices and anything else that is sugary.

How Many Calories Do You Need?

Simple energy balance is the goal in deciding how many calories you need. This means the difference between how much energy you get from your food (Calories) versus how much energy you use (Calories). The first thing you need to know is how much energy you use. Nutritionists have defined this as your Basal Metabolic Rate (BMR). You can get your BMR measured directly at some fitness centers, although it requires the right equipment and well-trained people to carry it out. You can also get a rough estimate of your BMR by using the following:

For adult males - Multiply your body weight by 10; add double the body weight to this value. [e.g., for a 150 lb male, $1,500 + (2 \times 150) = 1,800$ Calories per day]

For adult females - Multiply your body weight by 10; add the body weight to this value. [e.g., for a 120 lb female, $1,200 + 120 = 1,320$ Calories per day]

The simplest way to use your BMR is to compare it with the metabolic calorie impact of what you eat each day. If you eat less than your BMR, then you are supposed to lose weight. If you eat more than your BMR, then you will gain weight. You will maintain your weight if both are the same.

Knowing your BMR is a good start. However, your level of physical activity has a profound effect on your daily energy use. The simplest way to estimate the number of calories you need every day, which takes into consideration your BMR and your level of physical activity is:

For sedentary people: $\text{Weight} \times 14 = \text{estimated Calories per day}$

For moderately active people: $\text{Weight} \times 17 = \text{estimated Calories per day}$

For active people: $\text{Weight} \times 20 = \text{estimated Calories per day}$

Note: Moderately Active is defined as 3-4 aerobic sessions per week. Active is defined as 5-7 aerobic sessions per week.

Putting It All Together

For weight loss (hopefully fat loss), your caloric intake must be less than your caloric output. You can, of course, dig into the details of food calories for thousands of foods and keep track of everything you eat down to the milligram. And you can compare this with dozens of physical activities to find out exactly how much energy you use every day. This can get pretty complicated and time-consuming.

Now I am going to bust up this dogma a little bit by saying that you are not likely to overeat or undereat if you just pay attention to how you feel at a meal. If you eat slowly enough, you will feel satisfied right at the point that you should stop eating. If you stop before that, you will probably not get enough calories. If you stop after that, or eat so fast that you don't get the satisfied feeling quickly enough, then you will eat too much.

This means that eating the right amount of food for your metabolism is an inborn skill that your body already has. In fact, this is such a finely honed skill that, when you pay attention to it, you will eat an amount of food that will always be within about 100 Calories of your BMR. Just pay attention to it.

How Much Protein?

Diet and weight loss programs mostly ignore this question, probably because it has no simple answer. Or, worse yet, they give you a simple answer that may not be appropriate for you. Protein intake, however, is pivotal for body composition because it has a greater impact on building muscle mass than either of the other two food groups. The right amount of protein will help you build muscle, which boosts metabolism and optimizes fat burning. Getting a leaner body, therefore, depends on how much protein you eat and what your body does with it. Throw out the governmental recommended daily amount of protein. Here is what you need to know.

In essence, the more you exercise, the greater your protein needs will be. On the low end, you may need only 0.8 grams per kilogram of body mass, and on the high end as much as 1.8 grams or more of protein per kilogram of body mass. If you weigh 150 pounds, this translates into 55 to 123 grams of protein per day (or about 1.9 to 4.3 ounces). If you exercise heavily your workouts will rapidly break down muscle and create even more demand for dietary protein.

Keep this in mind: If you get too few calories from protein, you have to make up for it with carbohydrates and/or fat. One of the best recommendations that I have seen for judging proportions is to make your protein intake at least 30% of your total calories for the day. If anything, it is better to overshoot your protein intake than to take in too many calories from carbohydrates or fat.

Now, if you are worried about getting enough protein, let me point out a pleasant little surprise. You can live a very healthy lifestyle with only about 5% of your calories coming from protein. So, as you see, it is nearly impossible to miss a target as wide as 5-30% protein in your diet. Even eating nothing but ‘non-protein’ foods such as spinach would hit this expansive target.

Make It Easy, Use Common Sense

If all of the calculations and numbers above are a bit overwhelming for you, just use the common sense guidelines below for your optimal eating plan:

Never overeat or undereat. Eat slowly and stop eating when you feel satisfied.

Eat your highest protein meal at breakfast.

Eat an amount of protein that looks like the same amount as carbohydrate (e.g., one slice of bread, 1 slice of meat that looks like the same size as the bread).

Keep fast-impact carbohydrates ("white foods") to a minimum.
Smooth out the metabolic calorie impact of your total calorie intake with plenty of fiber (35-50 grams per day); add a fiber supplement to your meals if necessary to achieve this goal (The power of fiber for regulating metabolism is huge and often overlooked.)

STEP 2. FAT BURNING SUPPLEMENTS

Eating right for burning fat will provide you with a basic lifestyle foundation. If you are young enough or active enough, this may be sufficient. However, for most people after the age of about 30, the right eating plan will work to a certain point and stop. This is when weight gain proceeds in earnest, sometimes no matter how well you eat. Unstoppable weight gain causes most people to give up and get fat, or adopt a lifestyle that adopt yo-yo dieting. This is when the right supplements come to the rescue. In fact, supplements for getting your metabolism going, controlling your appetite and blood sugar spikes, optimizing your fat burning hormones, and boosting your main energy furnace are all crucial from the get-go.

The one-two punch of good supplements and a fat-burning eating plan will be the core of your success in hitting your target and staying there. Fortunately, there are a lot of supplements that are very helpful here. The trick is to find out which ones will work for you. There is no silver bullet that solves everything. Even some wildly popular supplements really aren't as good as touted. Hoodia is a good example of a so-called miracle weight-loss pill that really does very little good.

What About Hormones?

Consider your master fat hormone, leptin, as a starting point for understanding which supplements might work best for you. As you may recall, this is the key hormone that your fat cells make, which tells your brain to either use fat for energy or store more. When this hormone goes haywire, you acquire leptin resistance, which gets your body stuck in the "store more" mode regardless of what you might do to get rid of belly fat.

As I outline below, leptin resistance that causes you to put on fat has many components. And it takes a long time. You can expect, therefore, that getting rid of fat will also require many components and take some time. The time frame for significant results, however, is much shorter than the years it took you to put on excess fat.

Things You Do That Lead To Leptin Resistance

- Eat nutrient-poor food
- Drink nutrient-poor beverages that contain additives
- Follow a low-fat diet
- Eat the wrong kind of fats
- Do not eat the right kind of fats
- Eat too often or not often enough
- Follow any kind of a low-calorie weight-loss diet
- Eat too much or too little
- Take inadequate nutritional supplementation, or none at all
- Are deficient in key minerals
- Starve your thyroid of the key element that makes it work right

Exercise too much (!) or not enough
Do the wrong kind of exercises
Endure daily stress
Get poor or not enough sleep
Take over-the-counter drugs
Maintain a toxic overload
Have a chronic health disorder
Undergo surgery
Have a poor hormone balance (examples: testosterone, estrogen, growth hormone, cortisol, insulin, and adrenaline)
Age too fast
Take prescription drugs, especially steroids and antibiotics

No matter what diet, weight loss plan, special pills, or super ab crunch machine you have used in the past, leptin resistance will stop your progress at a plateau that you won't break through easily. Even if you do, getting back that "rebound fat" will seem to happen with lightning speed. You will typically fall short of your target. Getting stuck at a plateau, before you hit your target, is discouraging and puzzling. Most people give up and get fat again when this happens.

This is when the right supplements come into play. In fact, supplements for getting your metabolism going, controlling your appetite and blood sugar spikes, optimizing your fat burning hormones, reducing stress, and boosting your main energy furnace are all crucial.

Almost all of the supplements on the list below are widely available at nutrition stores. I do, however, provide my personal recommendations of product that I use. The links that I include here take you to product pages that offer information about them, where you can order them from my online store if you wish.

What Kinds of Natural Products Burn Fat?

Keep in mind that you will want to address fat burning in multiple ways, so I have classified the basic key supplements into five categories:

Metabolic Booster: Speed up your overall metabolic rate to burn calories faster
Blood Sugar Stabilizer: Level out sugar surges so that insulin and leptin are balanced together
Fat Regulator: Metabolize fat more efficiently
Chromium: Phenomenal extra boost for blood sugar metabolism
Probiotics: Friendly bacteria that make absolutely everything you do for weight management and good health better

1) Metabolic Booster

The two classic herbs that have the strongest scientific research behind them for boosting metabolism are Banaba and Green Tea. Clinical research shows healthy weight management in human volunteers supplementing with a banaba extract containing 1% corosolic acid. Green tea contains xanthine alkaloids, one of which is caffeine, that heat up metabolism without the nerve-jangling effects of other caffeine-containing herbs such as coffee.

In addition, green tea provides a bonus because it also contains one of the most widely studied and powerful antioxidants in the plant kingdom, abbreviated EGCG (epigallocatechingallate). Since belly fat acts like an inflammatory organ, the benefit of EGCG is to provide an anti-inflammatory effect that reduces the inflammation load caused by too much fat. The link between fat and inflammation partly explains why belly fat is associated with cardiovascular problems.

The only formula that I have ever found that contains both of these herbs in effective amounts is called [Pure-Weigh-FM](#) by Pure Encapsulations.

2) Blood Sugar Stabilizer

Several herbs and minerals are well-established in research studies to help keep blood sugar spikes under control. Some of the better ones include the following:

Gymnema Sylvestre has been used as a naturopathic treatment for diabetes for more than 2,000 years; it is known to reduce blood sugar levels and recent research on the ingredients from this herb have shown their benefits in fighting obesity.

Bitter Melon is a real star of the show for stabilizing blood sugar. It has been shown in clinical studies to increase insulin sensitivity, causing a hypoglycemic effect. Certain ingredients in this herb have been found to activate a protein called AMPK, which regulates glucose uptake (a process which is impaired in diabetics).

Cinnamon bark has been shown in studies at the National Institutes of Health to help improve levels of blood glucose and lipids (fats) in people with type 2 diabetes. Cinnamon contains MHCP, which mimics the biological activity of insulin itself.

Chromium is well-known for its stabilizing effect on insulin when taken in large enough doses (i.e., much more than the 100 mcg per day in most supplements).

Bis-glycinato oxo vanadium is an organic complex of glycine and vanadium specially designed for enhanced absorption. Vanadium promotes healthy glucose metabolism.

The only supplement formula that I have found that contains all of these ingredients is by Pure Encapsulations. It is called [GlucoFunction](#).

3) Fat Regulator

More than 40 years ago we commonly ate a diet that contained a type of fat that helped us regulate the way we used fat directly. We now know this ingredient as CLA, which refers to a mixture of conjugated linoleic acids. CLA disappeared from our diet because its source, meat and dairy from grass fed cattle, has also disappeared from grocery stores. Of course, you can still find products from grass fed cattle in health food stores, although they are now exorbitantly expensive. Plant oils, mostly from sunflower and safflower, are now the most convenient sources for making CLA, which is the sole active ingredient in [SuperCLA](#) from Biogenesis Nutraceuticals.

Plenty of good research shows that optimal fat reduction depends on about 4 grams (4000 mg) of CLA per day.

4) Chromium

The organic salts of chromium (i.e., picolinate or polynicotinate) show a remarkable effect on stabilizing blood sugar through its interaction with insulin. This is a key to keeping fat from going into storage around your waistline. Most supplements contain a small amount. However, the real deal happens best at levels of 1,000 or more micrograms per meal. Many supplement brands offer this mineral in 500 mcg capsules, so I see nothing special for recommending one brand over another. The chromium product at my online store is by a company that makes supplements for doctors. It is [Chromium Picolinate](#) by Pure Encapsulations.

By the way, even the professional-grade chromium products are inexpensive.

5) Probiotics

Supplemental bacteria for your GI tract may seem weird. However, everything you do for your health depends on them. Digestive function is the starting point for getting the most out of your food and your supplements for weight management. The key is to get the highest diversity of bacteria in the greatest amount, such as what you will find in [Probiotic Synergy](#) by Designs for Health. This link will take you to the product page at my store where you can read more about this critical supplement.

The relationship between overweight and the bacteria in your GI tract was the subject for an article that I wrote about sugar cravings and yeast infections. You may find this connection pretty shocking. You can see this article here:

ARTICLE: [Stop Sugar Cravings On HCG Diet](#)

Fat Burning Value Pack

As you have seen by now, all of the recommended supplements above are available at

Doctors Nutrition Center online. Fortunately, I have the authority to offer the most cost-effective ways for you to get them if you want to do so all at once. That is why I have put together what I call the [New Fat Burning Value Pack](#), with all five of the supplements above in one package at a greatly reduced price.

The New Kid on the Block: Irvingia Gabonensis

This herb has attracted a lot of attention from medical researchers for its use in weight loss. Research has become significant enough for me to review and comment on it in a special article. Irvingia is certainly the most exciting herb for weight loss that has appeared in the U.S. supplement market within the past 10 years. It is not available at retail stores, so I explain more about it and where you can get it in this article:

ARTICLE: [Irvingia Extract Weight Loss and Side Effects](#)

Caution About Supplements

As I already mentioned, there is no silver bullet among fat burning supplements, regardless of what all the hype says. Likewise, none of the basic five supplements that I outline here can be considered as a silver bullet for weight loss. However, they form the best supplement foundation for your fat burning. This set of supplements is your starting point. The effectiveness of these supplements depends on how well you stick to the other steps of slimming that I outline in this report and on your health status right now. I see many people every day who are already taking prescription drugs for one or more disorders. Prescription drugs alone are a factor in building fat because they ruin your health. Hormone imbalance -- especially estrogen dominance (men have it, too), testosterone deficiency (women have it, too), and growth hormone loss -- are all contributors to your overall health status and therefore to your body's tendency to either take on or get rid of fat. Some of these health issues and what to do about them will be the subject of the final step in this series.

STEP 3: EXERCISE

You will be surprised at how simple the right exercising can be and why much of the information offered to the public about exercise is misleading and even downright false.

Recall for a moment that the list of things that you do to get into and stay in leptin resistance includes exercising too much. It also includes exercising too little. Too little exercise is an obvious factor, although too much exercise is not.

When You Exercise Too Much

The concept behind intense workouts is that you must first tear down tissue, then rebuild it to a stronger level. This is fine if you can recover in less than 24 hours by completely reducing the inflammation that accompanies the destruction of your tissues. If you are young enough or healthy enough this should not be a problem. However, inflammation that lasts more than a day contributes to a fat-triggering response that causes belly fat to hang onto you like super glue.

You can reduce inflammation from excessive exercise more quickly if you know the right foods to eat and the best antioxidant supplements to take. However, you will most likely just reach a plateau in your fat management program that won't change. Before I discovered what I am about to explain, I was always puzzled by my running buddies who trained for marathons and yet never could get rid of the spare tires around their middles. Now I notice plenty of people who run with me in 10 kilometer races and half-marathons, which is one of my favorite things to do, and yet are obviously carrying too much fat. Even though they are in shape for running, they are carrying too much of an inflammatory load to get rid of their excess fat.

Effective Muscle-Building

Weight-lifting, for all of its benefits, falls short for burning fat unless you really know how to do it right. Of course, muscle-building drives fat loss because it contributes to faster metabolism by increasing lean body mass. However, building muscle mass also causes inflammation as well as stress on joints that can cause injuries in older adults. Furthermore, muscle-building exercises that focus on one part of the body, such as abs, do nothing for reducing fat. Ab crunches, etc., exercise muscle, not fat. (The joke is that your abs will, indeed, look great - although they will still be hidden under a 'stealth' layer of fat.)

The most effective way to build muscle with the least amount of stress is by an approach that is now variously called the "Super Slow Resistance Training" method. It has been called Nautilus Protocol (after the machines that were designed for it), the F.I.R.S.T Exercise System - Focused Intensity Resistance Slow Training), and simply the Super Slow method. The fundamental premise is to lift weights slowly, with an even resistance throughout the movement. The basic requirement for this method is the machinery,

which is available at fitness clubs.

The Super Slow method is supported by a considerable amount of scientific research, especially regarding its benefits to seniors for doing resistance training that combats osteoporosis. To get the details on how to use the Super Slow method, I recommend picking up any of a number of books on the topic - e.g., "Slow Burn: Burn Fat Faster By Exercising Slower," by Stu Mittleman and Katherine Callan.

The absolutely best, research-based book on this topic is *Body by Science*, by Dr. Doug McGuff and John Little. This book explains why this method is so effective, how to do it for optimal results, and the crucial importance of recovery time. In fact, I have been so impressed by this book that I launched a separate blog on fitness so I could spread the good word about their research. The nice thing about the research that went into this book is that Dr. McGuff has published a series of YouTube videos that pretty much explain and show all the highlights from the book. So you can either buy the book like I did, or you can watch their videos. For your convenience, I found all of their videos and put together a separate page at my new blog that lists them in order. You can see what I have accomplished by using their method and see where I've linked to all of their videos here:

VIDEOS: [Body by Science Videos](#)

What About Aerobic Exercise?

Aerobic exercise for burning fat has become controversial, probably because so much of this type of exercise is overly strenuous and causes inflammation. So here is what I've found that points in that direction without overdoing it: exercise briskly, not strenuously. This could mean doing something as simple as a brisk walk. The key questions are, as always, how often and for how long?

Here is what you can expect from a brisk walk. During the first 15-20 minutes the stored sugar in muscle tissue, which is in the form of glycogen, is your main fuel. Beyond about 20 minutes, you begin to deplete circulating blood sugar (glucose) and free fatty acids. After about 40 minutes of brisk exercise, you start burning more of your stored liver glycogen and begin breaking down stored fats. A brisk walk of 60 minutes, therefore, gives you about 20 minutes in a low level fat-burning mode. Brisk 1-hour fat-burning walks are most effective for overall fat reduction when you do them at least 3-4 times per week.

Walking is not the only form of brisk exercise that will give you the results you want. Anything that simulates the intensity and duration of a brisk walk will do. Indeed, at one time I referred my weight loss clients to a nearby dance studio, where they took part in a specialized dance class for exercise. It turns out that Latin-style dances were the best and most fun. An hour of Latin line dancing is a great way to have fun working up a sweat and getting into fat-burning mode!

And the Best Method Is...

Bouncing. Yup, simply bouncing up and down, preferably on a trampoline so you don't harm your joints. This may seem surprising until you understand the importance of bouncing to stimulate your lymphatic system for eliminating fat-triggering inflammatory toxins. The lymphatic system is a major system for eliminating toxins. However, its lymph glands have valves that operate in one direction, without a pump to move the lymphatic fluid. The motion of your body does that, especially the up and down motion that comes from bouncing. Bouncing increases lymphatic flow by up to 15-fold as soon as you start bouncing, even if you do a very soft, light bounce.

The benefits of bouncing on a mini-trampoline are known from many solid scientific research studies. Furthermore, the benefits of bouncing can be magnified tremendously by combining it with resistance training. Mini-trampolines are widely available at sporting goods stores and even on eBay. If you can combine resistance bands or small weights with bouncing, you will maximize the benefits of this type of exercise.

STEP 4. STRESS: THE MOST OVERLOOKED CAUSE OF FAT

This step is about what you must do to prevent stress from undermining your best efforts to burn fat even though you are eating right, taking the best supplements, and doing the right exercises. It is a key to healthy slimming. Daily stress is simply part of daily life, and good sleep is the best antidote for it. However, more than 30% of Americans are chronically sleep-deprived, and up to 90% lose sleep periodically. Scientists now know that insufficient sleep is just one source of stress that contributes to excess fat.

Stress and a Fat Stomach

Overstress complicates how your body uses fuel. Poor sleep, not enough sleep, women's monthly cycles, infections, exercising too hard, emotional stress from daily living, aging, prescription drug use, and many other health challenges demand energy. One of your body's responses to this demand is to command your liver to synthesize blood sugar at a higher rate to meet the extra need for energy.

When you are in good health, the extra boost in blood sugar helps you handle stress quickly, using up all the extra sugar that you need. However, when you are constantly under stress, your liver boosts blood sugar way too much for way too long. Your body is wonderfully adapted for this scenario by putting that excess blood sugar into storage as fat. This fat shows up around your middle, thighs, rear end, and upper arms.

Cortisol - Leptin's Partner in Managing Stress

Your adrenal cortex releases cortisol, which directs your body's response to stress by directing your liver to give you an energy boost when needed. On a daily basis, cortisol levels are highest in the morning so you can have the energy that you need to wake up and get going for the day. If you are slow to get going or feel fatigued for a long time after you wake up, your cortisol pathway is in poor condition.

We know that leptin levels must be low so that proper cortisol release can occur in the morning. Chronic late-night eating, too little sleep, and leptin resistance keep leptin levels higher during sleep than they should be. Your peak level of leptin is supposed to be between midnight and 2:00 AM. As it drops lower during good sleep, cortisol picks up and reaches its peak at about 6:00 AM, giving you a get-up-and-go start to your day. However, without good sleep, when morning comes, leptin that is still hanging around slows down cortisol release, which leads to feeling tired and out of balance in the morning. Your morning cortisol is also too low when you have to wake up by an alarm clock that interrupts your sleep. Getting enough good sleep disrupts the need for your body to handle over stress and enhances the balance of cortisol and leptin that you depend on to get you through the day.

Can You Really Lose Fat While Sleeping?

Although this an attention-getting question, the answer is that, yes you can, if your sleep pattern is good enough to keep leptin and cortisol in balance with one another. The more important question for many people is, "How can you get better sleep?"

Drug companies, of course, pay hundreds of millions of dollars per year to convince you that Ambien or Lunestra might be the answer. By the way, unless you have managed to escape this advertising blitz, you may have noticed that Ambien has been replaced with Ambien CR. The only reason for that is because the patent on the original Ambien formula ran out in October, 2006. The newer, so-called better formula is really just the newer, more recently patented formula.

Traditionally, people have discovered a myriad of excellent strategies for getting better sleep. I lump a host of these into a category that I call the Self-Suggestion Group. These include everything from breathing exercises to self-hypnosis and meditation. They are all worth exploring.

However, the strategies of most benefit to my clients, based on what I can teach them, involve supplements. Let's start by assuming that your fat-burning eating plan is in place, you have a good supplement program, and you are doing regular brisk exercise, and now you want to calm your life down with better sleep and less daytime stress. This is how you can really boost your daily energy and accelerate your fat loss strategies.

Supplements for Relaxation and Sleep

This not a simple subject, because it entails brain chemistry. Specifically, everything you do that influences your health also influences your neurotransmitters, which are the substances that carry out signals from nerve to nerve. In fact, neurotransmitters have a reciprocal relationship with hormones, which is also a complex subject. Fat-burning hormone balance is the topic for Step 5 of this series, so I will have much more to say about hormones then.

According to Dr. Eric Braverman, author of, "The Edge Effect: Revolutionary Brain-Mind-Body Science," your temperament (and your ability to manage stress) depends on your dominant neurotransmitter, either dopamine, acetylcholine, GABA, or serotonin. GABA is the key for a calm temperament, so deficiency in this neurotransmitter is easily corrected by GABA-containing supplements. Serotonin is the key mood neurotransmitter, so supplements that enhance serotonin levels improve mood and stress management. (Prozac and other antidepressants also elevate serotonin levels.) The most common serotonin-enhancing supplements contain 5-HTP, tryptophan, or St. John's Wort. Widely known herbs such as valerian, hops, kava kava, American skullcap, and chamomile are still the worldwide standards for relaxant herbs. (See below for my top herbal formula.)

Melatonin - The Sleep Hormone

One of the many hormones that you lose as you age is melatonin. The level of melatonin at age 25 decreases about 10% for each decade of life. The loss of your ability to make melatonin corresponds to an increased difficulty in getting to sleep and staying asleep all night. You can enhance your normal melatonin production by avoiding light, or wearing UV-blocking glasses, as you approach bedtime. Or you can supplement with melatonin just before bedtime. If you take a melatonin supplement, keep in mind that you will get the best results by also avoiding light or wearing UV-blocking glasses before bedtime. If you get out of bed in the middle of the night and turn on a light, you will destroy your melatonin and may have a difficult time getting back to sleep again. Common doses range between 1 to 3 mg, although the dose that gives me the sleep boost that I want is 20 mg.

Magnesium - The Most Common Missing Mineral for Relaxation

If you feel agitated in the evening or suffer from nighttime muscle cramps or restless leg syndrome, you are most likely deficient in magnesium. In fact, you are most likely deficient in this mineral even without those symptoms, because most of us are. Magnesium deficiency leads to numerous problems. However one that is pertinent here is that it causes increased levels of adrenaline. Too much adrenaline leads to tension and anxiety, which magnifies the effects of stress.

One caution about magnesium is that, when you are not used to it, most forms of magnesium will have a laxative effect. (This is why milk of magnesia is widely used as a laxative.) This happens in doses above 400-500 milligrams at one time. You can overcome this drawback by taking multiple low doses throughout the day until you get accustomed to it, or you can take a timed-release form.

The best timed-release formula that I have found, which I use myself, is Magnesium w/SRT (Sustained Release Technology) by Jigsaw Health. This formula contains 125 mg of elemental magnesium per tablet and can be taken four at a time without any problem. You can get it most conveniently here: [Jigsaw Magnesium w/SRT](#).

Recommended Herbal Formula

The most significant new herb for dealing with anxiety, insomnia, and stress is a recently introduced plant from the Amazonian rainforest called mulungu (scientific name: *Erythrina mulungu*). The best formula that contains this herb is Mulungu Sleep Formula. It enables a refreshing and complete night's sleep without any drowsiness the next day. The herb is boosted by small amounts of melatonin, 5-HTP, and magnesium. My sleep is better than it has been in years when I take Mulungu Sleep Formula before bedtime. Since it is my own herb formula, there is only one place where it is available online: [Mulungu Sleep Formula](#).

Stress - The Fat Super Glue

The bottom line is that whatever you do to attract or build daily stress is going to stick fat to you like glue. Whatever you can do to reduce stress, therefore, will go a long way to helping you shrink down that belly. Everything you do to lose fat will be more effective when you get better sleep and have less stress.

STEP 5. HORMONE BALANCE FOR FAT LOSS

Fat makes hormones that either help you burn fat or make you store more. Hormone levels change as you age, so keeping them balanced is crucial for maintaining youthful metabolism and a younger looking, slimmer and healthier body.

Major Hormones for Fat Loss

All of the hormones that your body makes are important, because they determine how you respond to everything in your environment. You have already learned about the fundamental roles of the hormones leptin, insulin, and cortisol in earlier parts of this series. These also interact with other classes of hormones, as follows:

- Thyroid Hormones
- Steroid Hormones
- Human Growth Hormone

All of these classes of hormones have a direct impact on everything that you do, especially on what you do to influence your metabolism. And all of them can be optimized by what you eat, by how you exercise, by the nutritional supplements that you take, and just generally by how you live your life. The good news is that, even if they are way out of balance, you can do a lot to put them back into balance. When your hormones are balanced, you will have the slim body that you are supposed to have, you will feel better and more energetic, and you will be healthier.

1) Thyroid Hormones

Thyroid hormones affect almost every process in your body, including body temperature, growth, and heart rate. At least 40% of the adult population suffers from thyroid deficiency. The most common symptoms of low thyroid function include the following:

- Accumulation of excess body fat
- Difficulty in losing weight
- High cholesterol
- High blood pressure
- Poor concentration
- Memory disturbances
- Cold hands and feet
- Menstrual problems
- Dry skin
- Thin hair
- Depression
- Migraine headaches
- Infertility

If you are overweight and have a history of difficulty in losing weight and keeping it off, you are most likely thyroid deficient. You can confirm this likelihood with a simple at-home test. Just take your temperature every morning as soon as you wake up. Put a thermometer under your tongue and let it remain there for at least three minutes, then write down the date, time, and temperature reading. Do this each morning for about two weeks to confirm the trend. If your basal body temperature is less than 97.8, then your thyroid is most likely underperforming. (Ladies: Your temperature will increase during the ovulation phase of your menstrual period, so make sure to take your readings before or after this phase to get an accurate basal body temperature.)

Caution About Thyroid Drugs

Doctors often fail to assess thyroid function properly. The most common test measures thyroid hormone levels, which may or may not be low in spite of thyroid deficiency. If your hormone levels are low, you may be prescribed a synthetic hormone replacement drug. However, the safety, stability, and efficacy of the most popular one, Synthroid (levothyroxine), has been under fire for years because of adverse side effects such as palpitations, nervousness, headache, insomnia, swelling of the legs and ankles, weight loss and/or increased appetite. On top of all that, standard protocol is that this drug must usually be taken for life.

On the other hand, your hormone levels may appear to be normal in spite of having a thyroid deficiency. The most likely reason is a deficiency in iodine, which is the critical mineral for thyroid health. Recent estimates are that 95% of the population is iodine deficient (see below).

Natural Alternatives

Desiccated thyroid pills are the most widely acceptable source of natural thyroid hormones and cofactors, although many mainstream doctors refuse to prescribe them and instead still rely on synthetic hormones. Thyroid extracts derived from pigs are nevertheless available by prescription.

Supplements for thyroid problems include vitamin A, vitamin B complex with high levels of B-12, vitamin C, vitamin E, coenzyme Q-10, and the minerals magnesium, manganese, selenium, and zinc. Multivitamin-multimineral formulas will offer a good boost to your diet in all of these nutrients. Supplementing with a good daily dose of vitamins and minerals is generally good advice, regardless of the status of your thyroid health.

Iodine - The Most Important Mineral That You Do Not Have

Every cell in your body uses iodine. However, the federally defined Daily Value for iodine (150 micrograms) is way too low to help your overall health except to barely prevent goiter. Furthermore, most people do not get even that amount each day.

Some surprising and crucial facts about iodine that you should be aware of about your body fat composition and overall wellness:

95% of Americans are deficient in iodine. This probably includes you.

Iodine deficiency may be the single most important unrecognized factor that makes you fat.

The healthy functioning of the thyroid is essential to maintaining metabolism and preventing the accumulation of body fat.

Every cell in your body needs iodine to function properly.

Different organs of your body use either elemental iodine or ionic iodine (iodide). You need both forms.

Kelp provides only the iodide form.

It is almost impossible to get sufficient iodine from food.

Dr. David Brownstein, in his book, "Iodine: Why You Need It, Why You Can't Live Without It (3rd Edition)," also attributes breast cancer, fibrocystic breast disease, and prostate cysts and prostate cancer to iodine deficiency. Dr. Brownstein is one of the nation's leading holistic thyroid practitioners. He recommends a product called [Iodoral \(Iodine Supplement\)](#) as a source of supplemental iodine, because it contains sufficient amounts of both the elemental and ionic forms of iodine.

If adjusting your diet and exercising more hasn't helped you reach a healthy body fat composition, you may have hypothyroidism. Fortunately, you can help normalize an underactive thyroid gland by increasing your intake of the mineral iodine. It is absolutely crucial to work with a knowledgeable healthcare practitioner who knows how to test for and reverse iodine deficiency, not just a doctor who will thoughtlessly prescribe drugs.

HUGE Caution About Dieting

Now that you have a little better understanding about the importance of thyroid hormone balance and weight management, here is a crucial tidbit to remember:

Lowering the intake of calories (dieting) has the unfortunate consequence of diminishing production of your most active thyroid hormone. This in turn lowers your metabolic rate, which alone leads to weight gain. Effective weight management will never be possible if you don't consume enough calories! If you have ever starved yourself to lose weight, only to see the weight return in a hurry as soon as you start to eat more food again, then you have experienced the consequence of blocking your own thyroid hormones from doing their job.

2) Steroid Hormones and Fat Metabolism

Your body makes approximately 150 steroid hormones. The most widely talked about of these are estrogen and testosterone. Classically these two are referred to as the female hormone (estrogen) and the male hormone (testosterone). Men and women have both, just in different proportions to one another. Quite a few misconceptions about steroid

hormones litter the landscape. One small one is that estrogen is a single type of molecule, when in fact it is a mixture of closely related molecules.

Some Important Misconceptions

Perhaps the biggest misconception of all is that estrogen balance is a problem only for women. In fact, estrogen balance in men is every bit as important as it is for women. It becomes critically important for men when testosterone levels drop, when estrogen builds up, and when progesterone synthesis almost disappears (more about this hormone below). All of these lead to fat gain in men AND women, plus a long list of other health consequences of estrogen dominance for both genders.

As a plant biochemist, I also think it is a pretty big misconception that plants make estrogen. They do not. This is related to the misconception that humans will metabolically convert steroid-like ingredients from herbs such as yams into human hormones. We do not. Certain plant natural products do, however, influence your estrogen balance. These include phytoestrogens such as the isoflavones of soy and many other kinds of plants. You probably have already heard about soy phytoestrogens. However, most people don't realize that the most potent phytoestrogen known from plants is from hops flowers, which are used for flavoring beer. Phytoestrogens have no chemical similarity to steroids of any kind.

Finally, you should also be aware of the fact that estrogen is made in fat cells. Indeed, obese women produce more estrogen after menopause than do thin premenopausal women. Estrogen dominance also leads to fat gain. Men show the same relationship between estrogen and fat that women do. "Man boobs" are more than just extra fat. They indicate feminization in men, due to estrogen dominance.

SIDENOTE: By the way, misconceptions about steroid hormones and what to do about them are a fundamental reason why women suffer from menopause. I have a lot to say about this topic in a report that I wrote, "Brief Guide to Menopause Hormone Balance," which is the most popular report that I have ever written. Uncomfortable and tortuous symptoms of menopause disappear when you know how to balance your steroid hormones naturally. The information that I provide is also beneficial to women who experience PMS and related problems. You can get this report for free as a subscriber to my Natural Health News online newsletter. Submit your subscription information at HerbScientist.com.

Internal Factors for Estrogen Dominance

Two primary internal factors indicate estrogen dominance. As mentioned above, one is estrogen from too much fat. The other is the dropoff in levels of progesterone, which is the key hormone that opposes estrogen. As you lose the ability to make sufficient progesterone, whether it be from aging or any number of health issues, you become more estrogen dominant. Gaining fat is just one of the consequences of estrogen

dominance. Others are too numerous to explain here. You can read more in the best book that I have read that talks about this subject, "What Your Doctor May Not Tell You About Menopause," by the late Dr. John R. Lee, MD.

External Factors for Estrogen Dominance

Chemicals that alter estrogen balance are everywhere. Plants are not the only dietary source of ingredients that influence estrogen metabolism. Certain kinds of molds also produce chemicals, called mycoestrogens, that act like estrogens. These molds are common contaminants in cereal crops, are the source of mycoestrogens in bread and other grain-based foods.

The most worrisome kinds of chemicals that add to estrogen dominance are man-made chemicals in food, water, cosmetics, sunscreen lotions, pesticides, weed killers, detergents, preservatives, adhesives, lubricants, paints, and electrical oils, to name a few. The most prominent ones in the news recently are plasticizers (BPA and phthalates) in water bottles, infant formula bottles, plastic food containers, plastic dishware, and plastic liners in metal cans. As a group, all of these synthetic chemicals that have an impact on estrogen function are called "xenoestrogens" (foreign estrogens).

A quick pointer on avoiding xenoestrogens is to avoid food and water that comes in plastic containers that may have been heated. Heat causes leaching of xenoestrogens into the containers. This means that if you buy bottled water, you have to know if it ever spent a hot day in the back of a delivery truck in the summertime. This also goes for plastic containers of all kinds in supermarkets, including cans that are lined with plastic inside. By the way, never, ever heat any food or beverage in your microwave oven if it is wrapped in plastic or in any kind of plastic container. And do not cook with pots and pans that are coated with non-stick surfaces. Stick with stainless steel.

What to Do to Achieve Estrogen Balance - *Guys Read This, Too!*

In spite of the onslaught of factors that lead to estrogen dominance, you can most likely reverse or at least alleviate the trend by supplementing with progesterone. The most effective products are progesterone creams, not oral supplements. The best progesterone creams offer measured doses that ensure a daily amount of about 20 milligrams for women and 10 milligrams for men. Most product labels recommend applying the cream daily for three weeks and then skipping a week, both for men and women. One caution is to be sure that the product does not contain parabens, which act as xenoestrogens. The reason that I offer this caution is because, as silly as it seems, I have found a progesterone product that contains parabens!

You will also favorably change your estrogen balance as you begin to lose fat. The more you slim down, the less estrogen you will make in your fat cells, and the more you will slim down. What a great concept!

Challenges of Getting Into Hormone Balance

As I said at the beginning, you make more than 150 steroid hormones. Progesterone isn't the only one that drops off, and it isn't the only one that you can take as a supplement. Others common ones include DHEA, 7-Keto-DHEA, and pregnenolone. Which one or ones will be most effective for you depends on your age, health status, prescription drug use, weight and body composition, fitness level, and many, many other factors.

Progesterone supplementation is the generally recommended starting point. However, if you are unable to achieve fat loss even though you are supplementing with progesterone, you may be successful with one or more of the others that I just mentioned. At some point you may even want to be tested for what your own hormone levels are. If so, just be sure to get help from a health and nutrition professional who knows the value of natural hormone supplementation, especially regarding progesterone creams.

Trickiness of Progesterone Supplementation

The main issues for selecting an appropriate supplement are: 1) oral vs. topical forms; and, 2) dosage control. Dr. John R. Lee, MD, who pioneered work with progesterone, noted that oral forms provide an unreliable dosage due to inconsistent absorption. He strongly advocated progesterone creams instead. Dr. Lee also explained the importance of dosage control, which is especially critical for the different dosages for men vs. women. The best products that I have found are creams that dispense exact dosages from pumps in the caps of the containers. The women's versions typically dispense 20 mg of progesterone, and the men's formulas dispense 10 mg. In my opinion the company that has led the way in the development of progesterone creams with exact-quantity pump dispensers is Devita Natural Skin Care Systems. I have come to know the creator of these products, Dr. Cheryl Ann Devita, and I am most impressed with her knowledge about hormone balance.

Based on what I have learned from my work with Dr. Devita, the products that my wife, Eve, and I use and recommend to our clients are:

For women: [Progesta Life PURE](#)

For men: [Progesta Life for Men](#)

3) Human Growth Hormone (HGH)

HGH is truly the master hormone, the granddaddy or grandmommy of all hormones. Whatever happens to your HGH levels shows up in just about every other aspect of your physical being. If you have plenty of circulating HGH, your health is probably excellent. Your lean body mass and percent body fat are close to ideal, and every other aspect of your health is in good working order. If your HGH levels are declining, then your health is

degenerating, your muscles are shrinking, and your body fat percent is increasing. All of these changes follow the rate of HGH dropoff as you age. In addition, your lifestyle choices regarding diet, exercise, stress management, and other health choices may be accelerating this decline. If you notice or feel that you are aging, then loss of HGH is at the root of it.

The challenge you have with HGH, therefore, is that it is like so many other hormones that you make less of after about age 25. How can you slow down or even reverse the trend? Plenty of research now shows that injections of HGH, in the right amount and at the right frequency, reverse the so-called signs of aging by the equivalent of 20 years or more after only a few months of treatment. Treatment with HGH injections is exorbitantly expensive, not to mention inconvenient. And you have to find a medical doctor who will prescribe, administer, and oversee your treatment protocol. Very few medical doctors are willing to do so.

Fortunately, you can also do many things to increase HGH levels that are more natural than getting direct injections with HGH.

What Exactly is HGH?

By the way, HGH is a protein, not a steroid. Many people confuse the two because they are mentioned in the same breath with the abuse of performance-enhancing drugs by professional athletes. Because HGH is a protein, with a very specific chain of 191 amino acids in just the right sequence, there are no synthetic equivalents like there are for natural steroids. All commercial HGH is now made by bacteria that have been genetically engineered to include the human gene for HGH. Although it is identical with native HGH, the genetically engineered product is referred to as rHGH (for recombinant DNA). rHGH has emerged as a top anti-aging treatment, even though it is unavailable to most people due to its expense and to government regulations that restrict its use. However, as I mentioned, you can raise your HGH levels naturally, as I explain below.

HGH and Body Fat

One of the most important consequences of building your HGH levels is that this hormone makes all the other hormones work better. Your fat burning machinery, headed by leptin, insulin, estrogen, and adrenaline, all start working like they did before you gained any excess fat. When HGH levels go up, body fat goes down and lean body mass (muscle tissue) increases. In fact, research shows that all this happens regardless of whether you change your diet or exercise programs. It even happens in the absence of exercise. Nevertheless, you can boost the effects of higher HGH levels by eating right, sleeping well, and working out.

Boosting HGH Levels Naturally

People can do a number of things to increase their own production and release of HGH naturally (i.e., without injections). A hard weightlifting session will cause a spike in HGH,

as will a good night's sleep. Furthermore, several common amino acids and niacin, in sufficient doses, will also help out considerably. The main amino acids that boost HGH levels, with the amounts that show clinical results according to published research are:

L-arginine (2-5 grams on an empty stomach one hour before exercise and before sleeping). May cause stomach upset or nausea on an empty stomach, which can be minimized or eliminated by starting at low dosage and building up slowly.

L-ornithine (2-5 grams at bedtime) Same caution as with arginine for stomach upset.

L-lysine (1 gram on an empty stomach one hour before exercise and before sleeping). No side effects at recommended dose.

L-glutamine (2 grams at bedtime). No side effects at recommended dose.

L-glycine (250 to 6,750 [!] milligrams; ineffective when taken with tryptophan). No side effects at recommended dose.

L-tryptophan (500 to 2,000 milligrams at bedtime, best taken with 30 milligrams of vitamin B-6 and 250 milligrams of vitamin C to help brain convert tryptophan to serotonin; tryptophan is ineffective when taken with glycine). Causes drowsiness; should not be taken before driving. (This is the ingredient in turkey meat that makes you drowsy after Thanksgiving dinner.)

OKG, L-ornithine alpha-ketoglutarate (a modified amino acid) (10 grams [!] or more taken with fluids). High doses are well-tolerated.

Niacin (200 to 1,000 milligrams). Avoid niacin flush by starting with low doses and building up slowly.

One of the best resources on the whole topic of HGH is available in a book, "Grow Young with HGH," by Dr. Ronald Klatz. Dr. Klatz is also the founder of the American Academy of Anti-Aging Medicine, which offers a huge amount of information on this subject.

Choosing Your Own HGH-Boosting Cocktail

Body builders have long known that stacking amino acids, meaning taking them together to enhance their effects, builds muscle because of the resultant HGH increase. Likewise, you can take one or more of the above ingredients together, either one hour before a workout or at bedtime to take advantage of your best HGH promoting strategies. If you are going to explore what works best for you, you can get each ingredient and experiment with different mixtures. This can be time-consuming and expensive.

The strategy that I have adopted is to seek out products that combine the right ingredients in the right amounts in a simple mixture that helps me get noticeable results in my weightlifting workouts. In so doing, the professional product line at Pure Encapsulations has the formula that I like best. It is appropriately called [Growth Hormone Support](#).

Effects of Meal Spacing on HGH

What happens when you follow the meal-spacing advice from Step 1 in this report? Recall that the recommendation was to space meals 5-6 hours apart, with no snacking in between. Here is what happens between meals when they are so far apart.

In the first hour after eating, blood sugar rises and insulin is released. This is peak time for storing excess carbohydrate and fat. An hour later, HGH is released as levels of insulin and blood sugar begin to fall. At this point, HGH acts to build up muscle protein, which is enhanced by the presence of insulin. More than four hours after eating, HGH finally begins to act solely to mobilize storage fat for burning as fuel. It only works this way in the near absence of insulin, when enough time has elapsed after the meal. This effect is magnified at night, when you get good sleep. Your best spike in HGH occurs about two hours after you get to sleep, only if you haven't had a bedtime snack.

CAUTION ABOUT HGH SUPPLEMENTS

You probably will not be surprised to know that the business of weight loss is replete with charlatans and useless supplements. One thing I want to caution you about is that HGH is not available as a supplement at nutrition stores. It is classified as a prescription drug. You will, however, discover many products that have "HGH" prominently on the label as if they contain actual HGH. They do not. Most of these products contain one or more of the amino acids that enhance HGH release, plus maybe a few ingredients to help absorption and to make the formula more complicated (i.e., expensive!).

BONUS STEP IF YOU ARE REALLY SERIOUS

Your eating pattern is the most overlooked aspect of losing fat among all the popular diets that focus on calories, exercise, and food groups (e.g., low carb vs. low fat), etc. As you have already discovered in Step 1 of this book, what you eat and how much you eat are only two of the three parts of eating to lose fat.

Taking Advantage Of When To Eat

The question now is, how can you optimize your eating pattern for losing fat? If you can take all the information that I have outlined for you so far about leptin (and its cohort, insulin) and HGH and how to optimize them, the one final bonus step that you can take for truly boosting everything that you do is summarized in one word: fasting.

Fasting, of course, means not eating at all. This what you do multiple times every day. You fast between meals on a regular basis. In fact, **breakfast** means breaking your overnight fast between dinner and your morning meal the next day.

How would you like to use fasting even more powerfully? This is where it might get a little complicated. I don't recommend one of those strenuous fasts that last for days or weeks. Nevertheless, you can adopt a certain pattern of fasting on a one day per week schedule, for example, that boosts your fat metabolism by optimizing all those critical hormones that are responsible for it. In fact, I would go so far as to say that, when done right, you will even slow down aging, build more muscle mass, tone your skin, and even reverse all kinds of chronic health problems.

To that end, I refer you to the **Eat Stop Eat** protocol that explains how you can make everything in your body work better when you adopt the right fasting pattern. By the way, I am not big into starving myself, or even getting uncomfortably hungry. Ever. This protocol does not require any of that. What I suggest you do to get a better idea of what this is all about is go to the link here and see for yourself what I am talking about:

[EatStopEat](#)

If you are like me, you will be truly amazed by this protocol and start wondering why nobody told you about it before.

Can You Ever Eat What You Really Want Again?

Finally, have you ever heard any diet guru or infomercial say something about how you can eat anything you want and still lose weight. Right. If you believe that, then I've got a bridge in Brooklyn to sell you.

It turns out that such wild claims may have some truth to them. The 'eat whatever you want' claim can work if you modify it by putting the word "**sometimes**" in there

someplace. As in, you can **sometimes** eat whatever you want and still lose weight.

What I discovered is that having what I call a “blow-up day” (waffles with syrup, bread, potatoes, potato chips, cookies, etc., ...you get the picture) once week had no negative effect on my weight, as long as I ate wisely the rest of the week. This is great because it offers some sanity to weight management. Can you imagine eating rabbit food and not being satisfied with your food every day of your life, for all time? (Rumor is that folks on the Ornish Ultra Low Fat Diet often have to have antidepressants because eating like that all time is so depressing!)

The question that I never asked is, how many blow-up days can I have and still keep my weight steady? It turns out that, if you work it right (not being totally gluttonous and silly with junk food), then you really only have to watch what you eat carefully on every other day. The eat wisely on the days in between. Of course, eating wisely means different things to different people, as the abundance of diet programs shows.

There is a scientific method to this seeming madness, though. It is described and optimized for you in a diet called, logically enough, ***The Every Other Day Diet***. This approach is remarkable for several reasons, the main perhaps being the pure relief that it provides for eating the foods you like without suffering any sense deprivation whatsoever. Image knowing that, by eating right one day, you can look forward to normally fattening foods the next day – without gaining weight!

The keys, of course, entail knowing what you must do on “wise eating” days and what you can get away with on the “blow-up” days in between. There is a lot more to this than I have explained in this brief explanation. So instead of more blather from me here, I will just suggest that you see for yourself what this diet is all about by going this link to find out about it for yourself:

[The Every Other Day Diet](#)

You can sure make this fat loss thing a lot easier when you know how to eat right!

FINAL COMMENT

These are the main points that I wanted to make about fat. Of course, this brief report only touches on a few of the many additional strategies that you could incorporate into an effective weight management program. So watch for my future newsletters to see what else I am finding out about belly fat research, diet pills, and weight management.

*All the best in natural health,
Dr. D*