



To Be Healthy and Skinny, You Must Be:

LEPTIN SENSITIVE



Being Leptin Sensitive Ensures That Your Body is in the Fat Burning Mode Instead of the Sugar Burning Mode... Which Ensures Your Ability To Stay Skinny and Healthy!

Leptin is a messenger molecule made in fat cells. It circulates through the blood and “speaks” to the Hypothalamus (a gland in the brain), telling the brain how much fat (energy) is stored in the body. When the **Hypothalamus** detects in the blood a **sufficient amount of Leptin**, it sets the body’s **METABOLISM to fat burning mode** — which is the desirable energy mode to be in.

On the other hand, if the Hypothalamus gland doesn’t detect enough Leptin, **it panics**, believing that the body is in danger of starving. When panicked, in order to mitigate the possibility of starving, the Hypothalamus directs the body to function in a sugar burning mode (instead of the much healthier fat burning mode). In the sugar burning mode, the Hypothalamus **lowers the basal metabolism** in order to conserve energy, so that as many calories as possible can be stored as fat.

The challenge for most people is that when Leptin levels become **extremely high**, the Hypothalamus’s **ability to measure Leptin no longer works correctly** and Leptin levels are measured as being zero. When this happens, one’s body will be put into a sugar burning and fat storing mode, even though there are excessive energy reserves (i.e. a high amount of fat on one’s body). This leads, eventually, to unhealthy amounts of fat storage and blood sugar problems.

By taking steps to **lower Leptin levels**, it is possible to correct the brain’s ability to sense Leptin and **restore the brain’s ability to correctly regulate the amount fat** on our bodies — as when we were younger.

Leptin’s essential role in human health is to prevent starvation. The amount of Leptin in the body affects energy levels, fat storage, mood and much more. Leptin is made in fat cells, circulates through the blood and tells the brain how much fat (stored energy) exists in the body. Leptin communication to the brain is a **HUGE ISSUE** because it is behind appetite, mood, fat storage, longevity and much more.

Everyone should come to understand the mechanisms of Leptin communication and make sure that this energy feedback system is working properly in one’s body.

Exactly How Does Leptin Affect Me From Day To Day?

Scientists have come to realize that the overweight condition, osteoporosis, diabetes, senility, mood swings and many other health issues result when there is a breakdown in the communication to the brain as to the amount of fat reserves that exist in the body. When that communication doesn’t occur correctly, and the brain believes that energy reserves are zero even though those reserves are very high, then many types of health problems get started, and if Leptin communication is not corrected, disease will result. If faulty Leptin communication is corrected, then **unhealthy fat storage ends** and many types of health problems evaporate.

The Leptin connection to health is a “must understand” topic for anyone who **wishes to stay “skinny” throughout a lifetime** and avoid diabetes, senility, osteoporosis, loss of energy, aging spots on skin, loss of muscle tone, etc. that is considered part of growing old.

We invite you to continue reading and to learn more about Leptin communication. It’s a quality of life priority subject. It is simple and it is perhaps the most important of all health issues.

Too much fat is bad

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Too little fat is bad

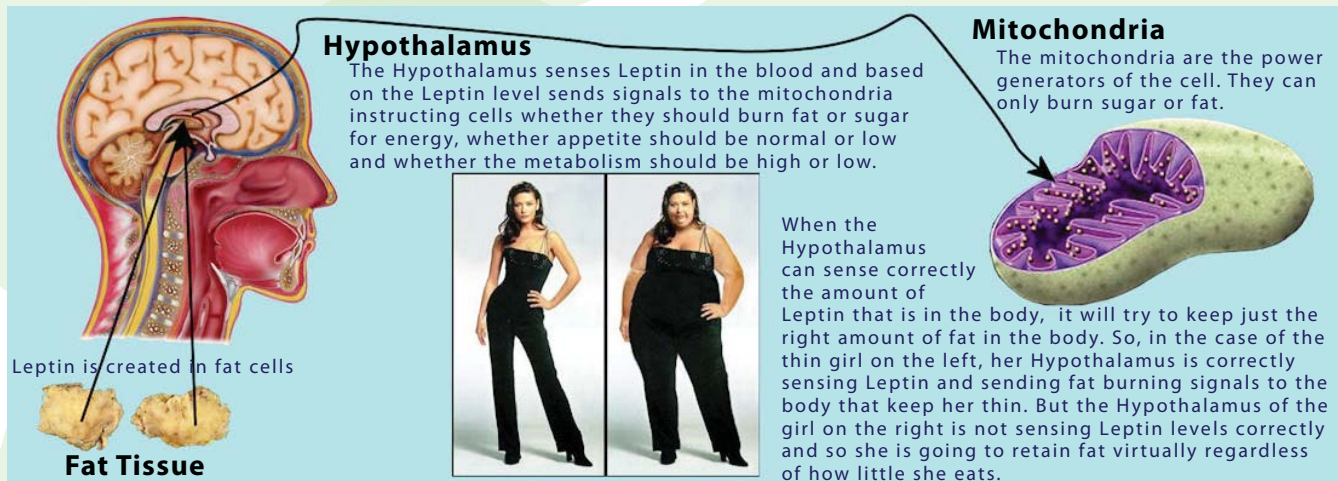
FAT STORAGE SWITCH

If Leptin levels in one's body are either very high or very low, then the body's cells will operate in the unhealthy fat storing mode. If Leptin levels are in a normal range, then the body's cells will operate in the healthy fat burning mode.

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Too little fat is bad



Hypothalamus Sensing of Leptin Molecules — Key to Survival

Human beings have a built in survival mechanism for ensuring that we always have some fat on our bodies to be used during a potential time of famine. The way this works is via the chemical messenger Leptin.

Leptin is created within the fat cells of the body and circulates in the blood. Leptin is sensed by receptors in the Hypothalamus (a gland in the brain), telling the brain how much energy reserve (fat) exists in the body. When the Hypothalamus detects sufficient amounts of Leptin, it is happy that there is enough energy (fat) stored in the body and signals the body that:

1. Appetite should be normal.
2. Cells should **burn fat** for energy.
3. Metabolism should be high (giving us lots of energy).

On the other hand, if the Hypothalamus senses too little Leptin, then it signals the body that:

1. Appetite should be greater than normal.
2. Cells should **burn sugar** for energy.
3. Metabolism should be lower (to enable fat storage).

Normally, the Leptin sensing system works quite well, and so, if, for example, one were to get sick and not eat for a few days then fat levels would go down (and Leptin levels would also go down as a result) and the Hypothalamus would soon detect a lowered level of Leptin and would lower the metabolism, increase the urge to eat, instruct the cells to only burn sugar in order to increase the amount of fat in the body. After a few days of this, enough fat would have been built up for Leptin levels to return to normal, and the Hypothalamus would again signal for fat burning.

When the Hypothalamus Becomes Insensitive to Leptin There Are Really Bad Consequences

If (for most people, when) the Leptin receptors in one's Hypothalamus become desensitized to Leptin, then the Hypothalamus will act as though Leptin levels are **ZERO** even though the amount of stored fat in the body (and therefore the amount of circulating Leptin in the blood) may actually be extremely high. In this *undesirable state*, the Hypothalamus will signal for all the wrong things to occur in regard to energy management — for appetite to increase, for the metabolic rate to be lowered, for cells to burn sugar, and for the body to store as much fat as possible.

The result is that a person with desensitized Leptin receptors will unavoidably get fatter and fatter, and since during sleeping hours that person will have no incoming food sugars to burn for energy, and since the body is still being told by the Hypothalamus to burn sugar (and not fat), the body will dismantle protein molecules (muscles and bones) while the person is sleeping in order to make sugar to be burned for energy. Thus, during each sleep such a person will:

1. Lose muscle tone
2. Lose bone density

These and many other bad things happens when the Hypothalamus's Leptin receptors become desensitized to the chemical messenger Leptin.

One should, by now, understand that the real cause of Osteoporosis, muscle wasting, and many other degenerative diseases is Hypothalamic insensitivity to Leptin. We will teach you in the remainder of this booklet how the Leptin sensory receptors become desensitized to Leptin and what can be done to reverse this problem.

Avoiding Harmful Hypothalamic Desensitisation to Leptin

Normally, the Hypothalamus gland accurately detects, even small changes in serum Leptin levels. However, the Hypothalamus can become insensitive to Leptin just like one's ears can become insensitive to noise when noises are too loud for too long or one's nose can become insensitive to smells when smells are too smelly for too long.

What Causes High Serum Levels of Leptin?

These four things will elevate your Leptin levels:

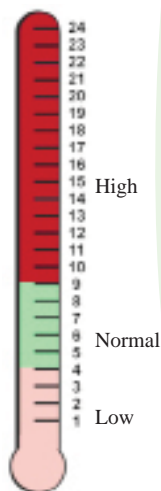
1. **Excessive fat** - since the more fat in the body the more Leptin will be in the blood.
2. **Elevated blood sugar** - increases Leptin production. In other words, the same amount of body fat will produce many times more Leptin if one's blood sugar is elevated (i.e. above 95).
3. **Eating late at night** - causes Leptin production to rise all night.
4. **Inadequate amounts of sleep** - since sleep removes Leptin from the blood stream, a lack of restorative sleep will result in increased Leptin.

What Helps Normalize Leptin Levels?

When you understand the main causes of high Leptin Levels (as listed above), the habits for maintaining normal Leptin levels become easy to understand. We will describe these habits in the pages that follow. Here's a short summary:

1. Avoid spiking blood sugar. What that means is don't eat sugar in the absence of protein, fat and fiber which slow the entrance of sugar into the blood stream.
2. Sleep sufficiently to reset Leptin levels each night.
3. Fast 12 to 18 hours daily to reset Leptin levels.
4. Exercise frequently to burn off blood sugar.
5. Take supplements that promote Leptin receptor repair.

Leptin Levels



The Effect of Leptin Levels Upon the Hypothalamus & Fat Burning

High - high Leptin levels cause the Hypothalamus to be unable to "sense" Leptin. It then acts as though Leptin is low (even though it is definitely not).

Normal - the Hypothalamus keeps the metabolic rate normal, instructs cells to burn fat and keeps the appetite normal (so fat will be burned for energy).

Low - the Hypothalamus lowers the metabolic rate, increases the appetite and instructs cells to burn sugar (this causes fat to be stored).

PRIMARILY BURNING FAT IS IMPORTANT

Optimum Health Requires Burning Fat, Not Sugar for Energy!

According to Dr. Ron Rosedale (one of today's leading medical researchers into Leptin):

"Health and life span are determined by the proportion of fat versus sugar people burn throughout their lifetime and so **the more fat that one burns as fuel, the healthier a person will be**, and the more likely he or she will live a long time; and **the more sugar a person burns, the more disease ridden and the shorter a life span a person is likely to have.**"



Food contains water, fiber, nutrients and fuel. Regarding the fuel portion of food, only two types of fuel can be used by our cells to make energy: **sugar or fat** (protein must first be converted to sugar).

Fat is a more efficient fuel than sugar. Burning a fat molecule to create energy produces 2.25 times more energy than does burning a sugar molecule, creating far fewer free radicals (harmful byproducts of energy production) than does burning sugar.

Burning sugar produces more free radicals than does burning fat. That means that burning sugar for energy guarantees that you will age faster. Also, burning sugar causes **Glycation** (cross-linking) damage to our tissues and organs. For these two reasons, people wishing to have a long and healthy life must avoid the sugar burning mode caused by Hypothalamus insensitivity to Leptin.

Sugar Burning Leads to Type 2 Diabetes

The **Hypothalamus** instructs the body's cells to burn sugar by signaling the pancreas to produce more insulin — which pushes more sugar into our cells, stimulates fat storage and makes us hungrier as blood sugar drops. With continued insulin production, eventually the cells will become resistant to insulin and then blood sugar will rise (Type 2 Diabetes), leading to accelerated Glycation and free radical damage. Diabetes is a ticket to early death.

Sadly, a majority of adults eventually become **sugar burners**. The many consequences include inflammation, more rapid aging, obesity, diabetes, heart disease, cancer, arthritis, osteoporosis, autoimmune disease, depression, memory loss, thyroid problems, Candida, and much more.

MASTERING LEPTIN

Learn to Master Leptin Levels

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Too little fat is bad

The following lifestyle habits will help keep your body in the fat burning mode by keeping your Hypothalamus sensitive to Leptin:

Eat Meals That Don't Spike Blood Sugar

Such meals consist mostly of *healthy fats, proteins and non-starchy vegetables*. So, uncooked, non-starchy and non-sweet vegetables and sprouts are great to eat in virtually unlimited amounts.

Also, undamaged, unsaturated fats are a **key ingredient** of Leptin sensitivity friendly meals. Especially Parent Essential Oils (PEOs), obtained from flaxseeds, walnuts, pumpkin seeds, hemp seeds, etc., and Monounsaturated Fats (MUFAs), obtained from avocados, olives, nuts, etc. are all Leptin friendly. Please note, however, that polyunsaturated fats are **health damaging when heated or processed**. Therefore, it is important to eat vegetables, vegetable seeds and vegetable oils raw and unprocessed. Cooking with processed vegetable oils and consuming hydrogenated/trans fats should be strictly avoided.

Saturated fats from coconut and meat are good to eat occasionally and may be cooked. If, however, one is overweight, then eating saturated fats should be quite limited so that one's own *excess* saturated fat is burned up.

Sweet foods (including fruits) and starchy foods (starch is changed by digestion into sugar and elevates blood sugar) such as corn, potatoes and grains should not be consumed until the Hypothalamus is resensitized to Leptin and one's excess fat is burned up. After this, such foods may be eaten (with proteins and fibers to slow the rate at which sugar enters the bloodstream), as long as fat gain doesn't occur. If, one's weight just before going to sleep is more than 2 pounds greater than one's weight upon arising, one may probably have eaten too much of these foods that day.

Sleep Sufficiently

The body uses sleep to repair itself, reset metabolic hormones (i.e. remove Leptin and insulin from the blood) and prepare to function optimally the next day. Leptin levels rise all day and peak just before midnight, unless we eat late in the evening and/or don't get enough sleep, in which case Leptin levels continue rising virtually all night. We need to ensure that sufficient sleep occurs to bring Leptin and insulin levels down to their daily lows before morning. If we don't do this, then higher Leptin and insulin levels in the morning will signal for fat to be continuously stored (i.e. sugar burning mode), which is exactly the opposite of what is desirable.

Fast 12 to 18 Hours Daily

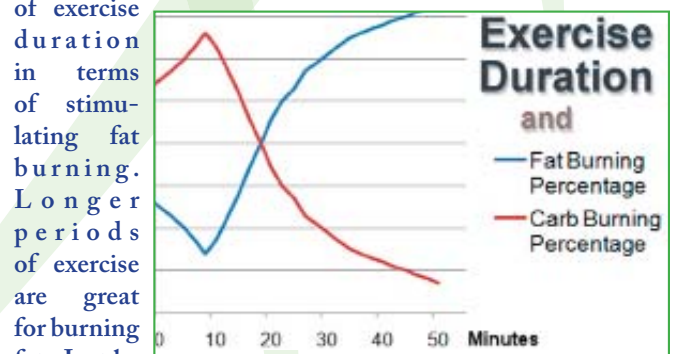
Having 12 to 18 fasting hours each night (from dinner to breakfast) helps the body's metabolic systems to reset themselves (i.e. helps in removing the hormones Leptin and insulin from the blood). One should begin fasting three to four hours before sleeping so that all of the time that one is asleep can be effectively used to repair the mitochondria and reset one's metabolic systems.

Exercise Daily

Exercise is very helpful for establishing the fat burning mode. The reason is simple. Exercise forces fat burning to occur (see chart below) and once fat burning is occurring, it continues for several hours (until blood sugar rises). To continue producing energy during exercise, after burning up the sugar in the blood, the body must burn fat. There are three particular times that exercise is most beneficial (any time, however, is good). These times are:

1. In the morning before eating breakfast. This is the best fat burning time.
2. In the evening after the last meal of the day. This sets up maximum fat burning during the night.
3. Within 60 minutes after eating a high carbohydrate meal to burn off the sugar *before* it is stored as fat.

Exercise should be significant enough to promote deep breathing and should continue for 30 minutes or more in order to ensure that the body enters a fat burning mode. (When all blood sugars are used up, the body must burn fat to continue its exertions.) The graph below shows the effect of exercise



Supplement the Diet

See subsequent pages for frequently asked questions and several supplement suggestions that will be of great help in lowering Leptin levels so that the Hypothalamus reactivates its Leptin sensors and turns on the fat burning signal.

Having Normal Leptin Levels is All Important

Virtually nothing in the field of health is more important than being a Leptin sensitive, fat burner! The following suggestions may help:

Decide That Your Brain Buds Shall Rule Over Your Taste Buds

Food tastes are, for the most part, acquired. We choose to like foods eaten at pleasant social gatherings. So, let's change what we teach ourselves and children/friends by serving "healthier" food at our social gatherings. If we "know" that something we like to eat will spike our blood sugar, then we can be wise and not eat it very much (and perhaps even decide to like it less). And vice-versa, we can learn to like foods that keep our sugar levels low. Very interestingly, once we do this and our Leptin levels are at normal levels, the Hypothalamus will rewire the brain and many old food cravings will disappear.

Get Your Leptin Levels Checked

There is nothing like a blood test to give you a "dose of reality". If you learn that your Leptin levels are 10, 12, 15, 19, 24 ng./ml. or higher, then you will have the needed "proof" of a problem to enable you to go into action.

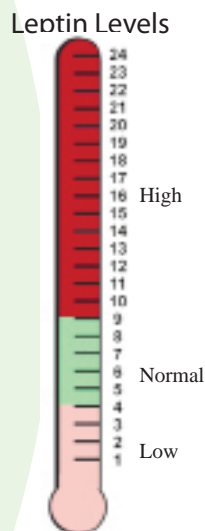
Commit to Being a Leptin Sensitive Fat Burner

Every informed person with a desire for quality of life and longevity will choose to maintain Leptin levels below 9 ng./ml. throughout his/her lifetime; and optimally, to maintain levels of 4 to 6.

Start the Day With Leptin Friendly Food

Starting the day with a protein, healthy fat meal is like playing music to the Hypothalamus's ear. By playing this concert to our Hypothalamus each morning, we start the day with the lowest Leptin levels of the day. A protein/good fat "break-the-fast" meal immediately tells your body it is GOING TO BE A "FAT BURNING DAY".

We invite you to follow the strategies on the previous page as much as possible. And when you do eat dessert, eat it with or immediately after a protein/fiber meal, so that it digests slowly and does not spike blood sugar, creating a Leptin spike that tends to desensitize the Hypothalamus's Leptin receptors.



LEPTIN STRATEGY

Encourage Hypothalamic Leptin Sensitivity With Supplements:

1. **The WIN Protocol** (www.Healthy-Living.org/win) is a complete meal replacement plan that will drop Leptin quickly by helping one to maintain a very low blood sugar while supercharging the body with nutrition. This is a "lose 1/2 to 1 pound per day" plan for most people.
2. **Eight Day Cleanse™** (www.Healthy-Living.org/cleanse) will rapidly lower triglycerides (circulating fat), which are a prime contributor to serum Leptin, by up to a thousand points. This alone may be enough to get one's Leptin levels below 9 and help the body switch into fat burning mode. Additionally, by reducing cravings for sweets, the Eight Day Cleanse is perfect as a kickoff for making a lifestyle change.
3. **Zeal Weight Management Kit** (www.zeal-ity.com/Products/WeightManagement.aspx) a superior program for Leptin lowering that substitutes two meals a day (breakfast and lunch) with supplements and recommends eating a normal dinner. Includes Irvingia gabonensis, an extract from African Mango that helps combat Leptin resistance.
4. **Embla Arginine** (www.MyLArginine.com) L-Arginine reduces accelerated production of Leptin in the presence of high blood sugar. It also helps to repair Leptin receptors in the Hypothalamus.
5. **Curcumin** — helps reestablish Leptin receptor site sensitivity. This supplement is fantastic for daily use and will help protect all of your cell membranes from lipid peroxidation.
6. **Conjugated Linoleic Acid** — this well-studied supplement both accelerates the release of fat from adipose tissue storage sites and it also reduces the production of Leptin in fat cells. Dosage: three 1,800 mg. doses spread out during the day.
7. **Acetyl-L-Carnitine** — this supplement works in two general ways. First, it escorts bloodstream fat into the cells and mitochondria where the fat can be burned for energy. Second, it helps to stimulate repair of Leptin sensors in the Hypothalamus. Dosage: 1,000 mg in the morning and 500 mg in the evening.

LEPTIN F.A.Q.

Too much fat is bad

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Too little fat is bad

Question: How do you know if you are Leptin insensitive and, therefore, burning sugar instead of fat.

A blood test showing Leptin levels at or above 9 ng/ml indicates Leptin insensitivity. Additionally, the following are indicators of Leptin resistance: craving sweets, waking up hungry at night, high levels of triglycerides and/or sugar in the blood, excess stored body fat (especially around abdomen), difficulty losing weight, losing muscle mass, age spots in the skin are proof that Glycation, which is sugar caused cross-linking of protein cells is occurring. Note that if age spots are occurring in the skin, Glycation is also occurring internally where you cannot see it.

Question: Why doesn't traditional dieting or fasting restore Leptin sensitivity and fat burning?

Answer: Inadequate fuel and nutrition creates internal stress, (the stress released chemicals adrenaline and cortisol) force sugar burning.

Question: How does restoring Leptin sensitivity in the Hypothalamus reduce frequent cravings for food?

Answer: We have frequent food cravings for only one basic reason. That reason is low blood sugar levels. When one is in a sugar-burning mode, blood sugar is more rapidly removed from the blood stream than when we are in the fat burning mode. By restoring Leptin sensitivity, one can burn fat instead of sugar, which greatly reduces food cravings.

Question: Is it difficult to retrain a Leptin resistant Hypothalamus to be sensitive to Leptin again?

Answer: Yes. It takes concerted effort to get the Hypothalamus to reactivate its Leptin sensors. But, it can be done in as little as three weeks of strict adherence to the suggestions on pages 4, 5 and 7. Not strictly adhering to the dietary suggestions, however, will cause a setback of 5 to 6 days for each day where one eats even one high carbohydrate foods or doesn't fast for 12 to 14 hours or doesn't sleep sufficiently well at night. Also, having so much stress that adrenaline overrides the Leptin signal to burn fat can cause a setback of many days. Once the Hypothalamus is sensitive again to Leptin and excess fat is gone such strict adherence to the rules is no longer essential.

Question: Why don't you recommend a high protein diet for restoring Leptin sensitivity?

Answer: Excess protein converts into sugar or toxic waste. Both of these are counter-productive.

Understanding the Fat-Burning, Leptin Sensitive Way of Life

Question: Why does stress cause the body to burn sugar instead of fat?

Answer: Adrenaline tells the body to burn sugar, because sugar burning occurs "faster" than fat-burning. Because stress causes adrenaline to be released, stress puts us into a sugar-burning mode, regardless of Leptin level.

Question: What precautions do diabetics need to take?

Answer: Diabetics need to inform their doctor of their plans to eat a Leptin-sensitivity friendly diet and then they need to frequently monitor their blood sugar so that it doesn't go too low. Inevitably, blood sugar lowering medications will need to be reduced as the body improves it's ability to manage energy.

Question: How important are supplements in regard to reversing hypothalamic Leptin resistance?

Answer: The suggested supplements are similar to after-burners on jet engines; that is they won't provide the initial thrust to get you on your way to Leptin sensitivity, but once you are going in the right direction, they will substantially push forward your results, accelerating fat loss by up to two pounds per week and compensating for less than perfection in making the necessary lifestyle changes. Therefore, they are highly recommended.

Question: Many people don't eat a Leptin sensitivity friendly diet and, yet, seemingly have no weight gain or other health consequences. Why is this?

Answer: It could be the persons you are referring to are young enough or physically active enough that they haven't yet stored appreciable amounts of fat (which permanently raises Leptin levels). Also, when people are young, their bodies use large amounts of calories to grow (and also to keep DNA repaired, which older bodies don't do). In the case of physical activity, calories are burned up and don't have a chance to turn into fat. In either case, fat levels are not being built up, meaning Leptin levels are not rising either. But, as soon as a person is older and/or decreases their physical activity, their "protection" ends.

Question: What books on Leptin do you recommend?

Answer:

- *The Fat Resistance Diet (Unlock the Secret of the Hormone Leptin to Eliminate Cravings, Supercharge your Metabolism, Fight Inflammation, Lose Weight and Reprogram Your Body to Stay Thin)*, by Leo Galland, M.D.
- *Mastering Leptin* by Byron J. Richards, CCN with Mary Guignon Richards
- *The Rosedale Diet*, by Ron Rosedale, M.D. and Carol Colman

What You Put In Your Mouth Determines Your Physical Health

Where many people stumble, in regard to restoring Leptin sensitivity, is in regard to eating Leptin sensitivity friendly meals (i.e. nutrient dense meals that emphasize good fats.)

In addition to the meal examples below (with both A and B list foods), we strongly suggest you obtain the books mentioned on page 6. They contain great menu ideas:

Breakfast Suggestions:

- Eggs with High Fiber Toast or Vegetables
- Scrambled Tofu
- High Fiber Bread with Avocado, Smoked Salmon, Dill and Poached Eggs
- Nuts and berries (like Granola)
- Whey Protein Smoothie with Almonds
- Avocado and Smoked Salmon Toasts
- High Fiber Bread with Pesto and Turkey Sausage
- Steak and Eggs
- Berries (small amounts), Nuts and Yogurt

Lunch Suggestions:

- French Soup
- Grilled Salmon and Steamed Vegetables
- Broccoli Soup
- Chicken Salad
- Romaine Salad
- Grilled chicken with vegetables inside high-fiber tortilla wrap
- Avocado and Smoked Salmon Toasts
- High Fiber Bread with Pesto and Turkey Sausage
- Steak and Eggs
- Berries, Nuts and Plain Yogurt

Dinner Suggestions:

- Tofu Portabello Casserole
- Grilled Tuna
- Chicken Tarragon
- Grilled Mahimahi
- Curried Chicken
- Baked Halibut in Pesto Sauce
- Shepherd's Pie
- Broiled Scallops
- Mung Dal Soup and Mesclun Salad
- Salmon Cakes with Asparagus

LEPTIN FRIENDLY MEALS

You will want to eat Leptin sensitivity friendly foods (A and B lists below) 90% of the days of the year in order to stay Leptin sensitive. **Pick your foods only from the A list for at least the first three weeks** after beginning the process of resensitizing your Hypothalamus to Leptin. After your body has changed into a fat-burning body, you can eat foods from the B list also, although weight loss will occur faster if you stick with foods on the A list until you reach your optimum weight. These lists are not exhaustive (refer to the recommended books on page 6 for more dietary suggestions). Non-sugary condiments are generally OK. For physically active persons with no excess weight, additional complex carbohydrates are okay.

“A” List Foods:

- Avocados, olives (canned olives are fine)
- Oils: flax, pumpkin, borage, almond, avocado, olive
- Eggs, especially Omega-3 rich eggs
- Fish, oysters, scallops, lobster, etc. (canned is okay)
- Poultry, also ground or made into sausage.
- Game, including cornish hen, buffalo, ostrich, pheasant, rabbit, venison
- Veggie Burgers (look for low carb, high fiber burgers with no more than six carbs per burger)
- Dairy: goat cheese, no-fat cottage cheese, no-fat cream cheese, no-fat ricotta cheese, feta cheese, Lite Swiss (great melted on a tortilla), parmesan cheese.
- Tofu: plain, herb, flavored (italian, oriental, thai)
- Protein Powder: egg protein, vegetable protein, whey protein.
- Vegetables: all types of salad greens, non-starchy vegetables, seaweed, turnips, onions, water chestnuts, zucchini, sprouts (all varieties), etc.
- Mushrooms (portobello, shitake, oyster, button)
- Nuts (raw) (and NOT PEANUTS)
- High Fiber starches: *La Tortilla Factory* tortilla, *Manna from Heaven* bread, Low-carb, high fiber crackers
- Legumes: black soybeans, hummus (don't make a meal out of it, but use as a condiment)

“B” List Foods:

- Oils: coconut, red palm, safflower
- Meat: beef (except non-lean ground beef), lamb, pork (boiled ham, loin chop, pork tenderloin)
- Dairy: one slice daily of hard cheeses, plain yogurt (no more than 1/2 cup serving twice a week), one percent cottage cheese, skim ricotta cheese
- Medium starchy/sugary vegetables such as carrots, peas
- Fruits: apples, apricots, blueberries, cherries, grapefruit, kiwi, nectarines, peaches, pears, plums, raspberries, strawberries, tomatoes
- Seeds (raw): pumpkin, poppy, sesame, sunflower
- Legumes: adzuki, navy, lentil, mung
- Low Starch, High Protein Pasta (keto spaghetti)
- Low Carb Tomato Sauce (less than five carbs per serving)

AS LEPTIN GOES UP...

... Health Goes DOWN!

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Too little fat is bad

Only fat burners can enjoy maximum health and longevity. Being a fat burner, which is synonymous with being Leptin sensitive, means that one has chosen health and long life. That is a great choice!

The Hypothalamus's perception of how much Leptin there is in the body is what determines the daily energy rhythms throughout the 20 trillion cells that make up the human body. These energy rhythms are coordinated by the Hypothalamus in concert with another major partner in energy regulation called insulin.

Insulin Resistance and Leptin Resistance - Definitely the Wrong Way to Go!

For optimum health, both insulin and Leptin levels should be on the low side of normal and the cells of the body and the Hypothalamus should be very sensitive to changes in their levels. If there is one single hallmark of longevity, it is low (but adequate) levels of both of these hormones.

Among insulin's jobs, as it works with Leptin to regulate energy and fat storage, is escorting blood sugar into cells (without this escort, they don't go in) and instructing fat cells to make more fat out of blood sugar.

The beginning of the downward path in health are temporary periods of elevated Leptin levels and/or adrenaline that cause the Hypothalamus to temporarily switch the body into sugar burning mode. Sugar burning mode is synonymous for fat storing mode. As fat stores escalate, Leptin levels will also escalate. Eventually a desensitized Hypothalamus results, and then the body will CONTINUOUSLY burn sugar for energy. This is a major turning point for the bad.

Continuous sugar burning means a constant desire for starchy, sugary foods. It means that the Hypothalamus will continuously command the pancreas to make more insulin in order to escort sugar into cells to be burned and to cause more fat to be stored. More incoming sugars cause more insulin production.

When cells are constantly overstimulated by insulin, eventually the insulin receptors located in individual cell membranes will become resistant to insulin, requiring more and more insulin to move sugars into the blood. First, the liver and then the muscles will become insulin resistant. Eventually, even one's fat cells will become insulin resistant and from then on, one will no longer store additional fat easily. This causes fat storage to slow down and weight to plateau. Some people plateau at 200 pounds, others at 300 pounds and some at even higher weights.

Once fat storage begins to slow down the even bigger problem is that incoming food cannot be stored away as fat and so blood sugar rises even more. As blood sugar rises, protein cross-linking and inflammatory reactions begin to seriously damage the body's cells. Also, yeast and low-grade bacterial infections (which are accelerated by high blood sugar) become chronic.

Associated with high blood sugar are the following:

- High blood sugar prevents magnesium from getting into the cells properly. Magnesium is critical to cellular energy.
- High blood sugar causes cells to no longer utilize essential fatty acids which are vital to cell membrane health. With a loss of cell membrane integrity, free radicals have greater power to inflict damage.
- With high blood sugar and high insulin levels, cells begin to retain sodium, which causes high blood pressure and can lead to congestive heart failure.
- With high blood sugar, cancer rates begin to increase as cells begin to ferment because of high amounts of sugar within the cells.
- Unless one wakes and eats every few hours during the night, blood sugar will be maintained during sleep by dismantling bone and muscle proteins leading to osteoporosis and loss of muscle tone.
- High blood sugar causes faster memory loss.
- High blood sugar suppresses the immune system, leading to arthritis and other autoimmune diseases.
- High blood sugar causes Glycation, and AGES (advanced Glycation end products). These are commonly evidenced as age spots on the skin, cataracts in the eyes, and brain damage characteristic of Alzheimer's and Parkinson's.
- Blood sugar resembles the antioxidant Vitamin C, and so in times of infection, one's cells will attempt to use blood sugar in an effort to fight off the invaders, just to find that the false Vitamin C only makes things worse.

The bottom line is that high Leptin levels are the gateway to poor health. High Leptin levels need to be avoided as much or more so than do free radicals. When someone understands the import of Leptin, keeping those levels low enough to enable fat-burning is the prime health goal anyone can have.

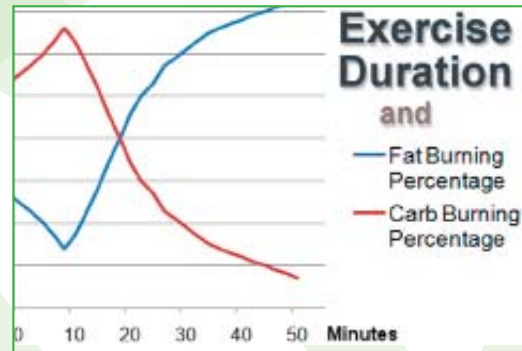
The Most Important Health Practice Is Leptin Management

Being in the fat burning mode is the key to long life and good health. Being in the sugar burning mode is the surest way to lose one's health and die early. To stay in the fat burning mode it is essential to keep Leptin within the fat burning range of 4.0 to 9.0 ng/ml. Here are the most important things to understand about Leptin management and fat burning:

- Fat and sugar are the only sources of energy in the body. Fat is the body's main stored energy and the **healthiest energy source**. The body can only store a few grams of sugar in the form of blood sugar and glycogen, but the body can store many pounds of fat.
- Leptin is made in fat and is monitored by the brain. For fat burning to occur, **Leptin needs to be in the range of 4.0 to 9.0 ng/ml**. When Leptin is outside that range, the brain puts the body into a fat storing mode. The fat storing mode is synonymous with sugar burning mode. It is a lower energy mode, and a mode which leads to disease and addiction.
- The main other cause of being in the sugar burning mode (other than Leptin being out of range) is living with excessive fear — **adrenaline puts the body in sugar burning mode**.
- The following are **sure signs** of being in the unhealthy sugar burning mode, which means that Leptin is probably out of range.
 - A Leptin test showing Leptin levels are higher than 9.0 ng/ml.
 - Sugar cravings
 - Age spots on the skin
 - Osteoporosis
- Serum Leptin being higher than 9.0 ng/ml is the main cause of a person being in the sugar burning mode. And the main reasons for **Leptin going too high** are:
 - Too much stored fat.
 - Too much blood sugar or too much triglycerides.
 - Insufficient sleep to remove Leptin and insulin from the blood each night.
- The most important practice for **keeping Leptin within the healthy range** of 4.0 to 9.0 ng/ml is a diet that includes a significant amount of fresh vegetables, a moderate amount of unsaturated fat and a moderate amount of protein, and an amount of carbohydrate that matches one's expenditure of energy.
- The practice that is most responsible for elevated Leptin and associated **unhealthy sugar burning** is the **eating of sugary foods and/or carbohydrate rich foods**.

LEPTIN PRACTICALITIES!

- Prolonged **physical exertion** (at least 30 minutes) will put the body into **fat burning mode** regardless of Leptin level.



- So, to mitigate the harm from eating sugary and carbohydrate rich foods, one should work off the calories with physical activity.
- Actually, any fat gain should be remedied by an increase in physical activity or by fasting for 24 hours every other day until that weight gain is reversed.
- One might be tempted to think that skinny people will never have high Leptin levels and never be fat burners since they don't have much fat stored on their bodies. However, that isn't necessarily true. If skinny people have **belly fat or high blood sugar levels or live with fear or stress or get inadequate sleep**, they can still have high Leptin levels or function in the unhealthy sugar burning mode.
- Exercise is the only real way for avoiding rising Leptin levels while eating in an unhealthy way and or not getting sufficient sleep. That makes exercise the great key to avoiding bad consequences from a dangerous lifestyle. However, when that physical exercise is discontinued the bad eating habits will likely continue and soon one will become a Leptin-out-of-control, sugar burner.
- In today's world, farm soils are often depleted of iodine. Since iodine is important for metabolism (conversion of food to energy), it may be important to eat iodized salt or otherwise supplement with iodine. Learn more at www.healthy-living.org/iodine.
- A Leptin friendly diet includes unsaturated fats. Learn more at www.Oxygen4Cells.com.
- In summary, eating sugary foods and carbohydrate rich foods more than just a few times per year is the beginning of the end of health for people who don't burn off those calories immediately.

LEPTIN REGULATION

Too much fat is bad

10

Too little fat is bad

Leptin Regulation is A Top Priority

Hypothalamus regulation of the body's metabolism (use of cellular fuel) is the most important system governing long term human health and is the absolute right way to maintain a healthy weight.

Weight gain and energy regulation problems begin when the Hypothalamus (a small gland in the brain) loses its ability to communicate with the hormone called Leptin. Leptin is made by fat cells and the amount of Leptin in the body corresponds to how much fat exists in a person. Fat is the best energy source for human cells. That's why people store fat instead of sugar cubes. When the Hypothalamus loses the ability to detect Leptin, it then believes that the body is starving for food. The Hypothalamus then panics and implements emergency measures in order to bring the amount of fat in the body up to adequate reserve levels.

However, if the ability of the Hypothalamus to detect Leptin is gone, the emergency will never end. When the subconscious brain continuously commands the body to store fat, no amount of conscious efforts to diet or exercise will ultimately win. The only sensible way to proceed in this situation is to fix the broken Leptin sensory switch in the Hypothalamus.

Hypothalamic Leptin Regulation Of Stored Fat Is A Permanent Weight Loss Solution

Except for genetic defects (very rare), the Hypothalamus has the ability to manage fat storage perfectly. It usually does so for quite a few years of life. But, if the Hypothalamus is faced with long-term stresses from the overeating of carbohydrates, anxiety and insufficient restorative sleep cycles, then it's ability to manage fat storage can break. The result of this breakdown is fat gain and disease.

Lifestyle is what breaks the Leptin sensory switch and lifestyle will also repair that broken switch. We explain how to repair a broken hypothalamic Leptin sensory switch on pages 4,5 and 7.

There Are Two Categories of People

People can be divided into two categories:

1. Fat Burners
2. Sugar Burners

Fat burners get to live long and healthy lives without having to constantly worry about excess fat. Sugar burners get to live shortened, diseased ridden lives and they get to constantly fight the battle against unwanted fat.

Enabling one's brain to be Leptin sensitive is the most important health choice one can make.

When a person is a sugar burner, there is, with virtually no exceptions, only one reason — a health damaging lifestyle that eventually breaks the Leptin sensory switch in the Hypothalamus.

The Leptin sensory switch first breaks when a person has a relatively small number of extra pounds of stored fat. At various times during the day, due to circadian, hormonal cycles, Leptin levels will be so high that the Hypothalamus cannot "correctly hear" the signal and will switch the body into fat gain mode. The longer this continues, the more likely that those few pounds of unwanted fat will grow into more and more pounds and then eventually into significant health problems.

Most people react to gaining fat weight by dieting.

Unfortunately, traditional dieting is a completely wrong approach to weight management. Dieting just reinforces the Hypothalamus's belief that the body is in the middle of a terrible famine. The Hypothalamus then believes that the body must build up its fat stores or it will die. Instead of dieting, one should eat Leptin sensitivity friendly meals and sleep and exercise in a way that restores Leptin sensitivity.

For Every Thousand Hacking at The Leaves of a Problem There is One Getting at The Roots

Understanding how the Leptin sensory switch operates is the knowledge that will allow one to get at the roots of long-term weight management and also ensure one's long term health.

With this knowledge you will know how to maintain low but adequate levels of Leptin in your body and how to keep your Hypothalamus responding instantly to changes in your Leptin levels. By doing this, you will be free to live life to its fullest — with energy, vitality and health — and without the burden of unwanted weight.

To learn more about the importance of Leptin, please visit www.Healthy-Living.Org or www.Health-Inspiration.com.

Call 1-800-704-0986 for more information about our Leptin-friendly supplements or send questions via email to info@Healthy-Living.Org or write to Healthy-Living.Org, 1098 South 890 East, Orem, UT 84097.