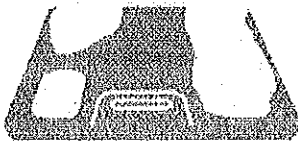


Complete Training Series # 5

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Bodyfat Reduction and the Insulin Response: How to Make Yourself Fat, Hungry, and Tired



Thankfully, the ridiculous fad of the low carb diet finally seems dead. Hopefully the myth that carbohydrates are evil will die with it. Carbohydrates are necessary to fuel our workouts, but consumed in excess and at the wrong times, they can make us fat. As an athlete, one key to reducing bodyfat is eating carbohydrate in ways that fuel our muscle cells but not our fat cells.

Carbohydrate is necessary in the muscle for effective fat burning to occur, so carbohydrate stored in the muscles is good. Carbohydrate can also be stored as fat in the fat cells, enlarging them. When,

how, and what type of carbohydrate you eat dramatically affect where and how carbohydrate is stored.

The human body tries to maintain tight control over all its functions. It has thousands of built in self-correction systems to keep it running smoothly. Blood sugar is one of the functions that the body maintains rigidly. Our endocrine systems react strongly to keep blood sugar within certain normal parameters. If blood sugar goes either too high or too low, alarms are set off and the body reacts powerfully to bring blood sugar levels back to normal.

Insulin is a hormone secreted by the pancreas to help maintain optimal blood sugar level. Insulin's job is to remove sugar from the blood and store it, either as glycogen in the muscles and liver or, more frequently, as fat. Insulin is good. It helps maintain balance in the body. However, when triggered at the wrong times and in great amounts, insulin will make you fat. Preventing frequent and intense insulin responses is the single most critical step in reducing bodyfat for many people.

Insulin also has a negative affect on resting metabolic rate. Depending on the frequency and the severity of the insulin response, it may reduce the number of calories burned at rest by as much as eight percent! Over time, this could add up to a significant amount of extra bodyfat.

Carbohydrates are very simple molecules, which digest very quickly and easily. Even the most complex carbohydrate is nothing more than strings of sugars loosely tied together. Digestion of carbohydrates begins right in the mouth with an enzyme called Salivary Amylase, which is located in the saliva. By the time carbohydrates even reach the stomach, digestion is well underway and much of the carbohydrate you just ate is already sugar.

When you eat carbohydrates by themselves, they digest too quickly and the sugar enters the bloodstream all at once, sending your blood sugar level soaring. This sets off an alarm and the pancreas secretes insulin into the bloodstream to take some of the sugar out. This is a good response, preventing a dangerous situation, but it comes at a cost.

Severe insulin responses cause excess fat storage and low blood sugar. Low blood sugar causes a number of problems. The first is lethargy. Even mild activities seem exhausting. Another symptom of low blood sugar is mood swings. The greatest problem caused by low blood sugar when trying to reduce bodyfat is hunger. There are a number of different triggers for hunger and satiety. When blood sugar is the trigger, guess what specific cravings are usually manifested? You guessed it, carbohydrate. This sets up a vicious cycle:

Eat Carbohydrate

?

Increased Blood Sugar

?

Insulin Secreted

?

Carbohydrate Stored as Fat

?

Low Blood Sugar

?

Hunger (Carbohydrate Cravings?)

?

Eat Carbohydrate...

Eating can make you hungry and reduce energy levels. Repeatedly triggering the insulin response causes fat storage, hunger, and lethargy. Nobody intentionally makes themselves fat, hungry, and tired, but many people unknowingly do so several times every day.

Preventing the Insulin Response

The way you consume carbohydrate may be making you fatter than you want to be, but carbohydrate is not the enemy. Depending on how you structure your food consumption, carbohydrate may be stored mostly as fat (bad), stored mostly as carbohydrate in the muscles (good), or not stored at all, but burned as fuel (good). Managing the insulin response is a critical aspect of this. Carbohydrate in the bloodstream provides energy right now. Carbohydrate in the muscles gives energy for tomorrow's workout. **DEPLETING CARBOHYDRATE WILL NOT MAKE YOU LEAN.**

The key is structuring meals and snacks so that you can consume carbohydrates in your diet, but keep from suddenly elevating your blood sugar level. Three strategies come into play here:

1. Choose carbohydrates that digest more slowly and therefore enter the bloodstream gradually.
2. Combine carbohydrate with other types of food that digest more slowly, essentially "time-releasing" carbohydrate.
3. Consume concentrated carbohydrates, such as sugar, pasta, rice, cereal, bread, corn, rice and potatoes only after workouts. Consumed immediately after workouts, calories from concentrated carbohydrate sources are likely to be stored in the muscles as fuel for tomorrow's workout instead of in your fat cells.

Glycemic Index

The glycemic index (G.I.) of a food is a measurement of how quickly the carbohydrate in that food enters the bloodstream compared to pure glucose. Glucose has a glycemic index of 1.0. A food that has a G.I. of 0.7 enters the bloodstream 70% as quickly as pure glucose. For someone trying to lose bodyfat, a diet comprised largely of low G.I. foods prevents excessive insulin secretion and ensures that the carbohydrates in the diet are available as fuel instead of being stored as fat.

A list of the glycemic index of common carbohydrates is at the end of this article. Carbohydrates with a glycemic index of 0.4 or lower may be considered low G.I. foods, which are the best choices. Carbohydrates with an index between 0.4 and 0.7 may be considered moderate G.I. foods and are good choices. Carbohydrates with an index over 0.7 will tend to trigger an insulin response and should be eaten primarily right after workouts or in combination with lower G.I. foods (to create a combined G.I. of less than 0.7).

Combining Foods

Protein is the friend of an active person trying to decrease bodyfat. Consuming protein with carbohydrate helps ensure that the carbohydrate is not stored as fat.

Choosing low to moderate glycemic index carbohydrates is a useful strategy for reducing insulin secretion, but properly combining foods in meals and snacks can be just as powerful. Learn to make this strategy a natural part of your lifestyle and you will become leaner.

Carbohydrate is a very simple molecule that digests very rapidly and easily. Protein, on the other hand, is a very large, complex molecule, which digests much more slowly. Remember that when you eat different types of food together, they move through the digestive tract together, being digested and absorbed at the same rate. If you eat protein and carbohydrate together, the protein dramatically slows the carbohydrate digestion. Instead of a large amount of carbohydrate entering the bloodstream all at once and driving the blood sugar level up dramatically, the carbohydrate trickles slowly into the bloodstream. Protein "time-releases" carbohydrate. As digestion occurs, blood sugar is gradually burned off almost as quickly as it enters, preventing quick increases in blood sugar level that cause the insulin response. Blood sugar remains just slightly elevated for a long period of time. This creates the perfect situation: good mood, feelings of energy, minimized hunger, and a slow, steady supply of sugar to be burned with fat to provide the body with energy for daily activities.

Fat digests very slowly, just as protein, so logically it could be combined with carbohydrate to prevent dramatic blood sugar fluctuations. While this will prevent the insulin response, think carefully about the logic behind consuming fat to be sure that the carbohydrate you eat will not be stored as fat. You store fat calories as fat calories instead of storing carbohydrate calories as fat calories. You get fat for a different reason. Fat is the most calorie-dense of all biological fuels, having about 2¼ times more calorie per gram than either protein or carbohydrate. Better to stick with low glycemic index carbohydrates and combine them with protein in a relatively low fat diet.

Make a habit of eating protein every time you eat carbohydrate (except during workouts), eating concentrated carbohydrates only after workouts, and choosing carbohydrates that fall lower on the glycemic index. Your energy level will increase while the extra pounds melt away.

[Click Here and View Glycemic Index of Common Foods](#)

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