

INSULIN: A PROBLEM WITH MY GENES OR THE JEANS?

Insulin is one of the most powerful hormones of the body. Without it, a person dies quickly, with too much of it we get heart disease, obesity, diabetes & chronic degenerative diseases. What the body requires is hormonal balance or *homeostasis*.

Insulin is secreted by the pancreas whenever a carbohydrate is eaten...bagel, cookie, carrot or rice...any carb will stimulate the release of insulin. Why? Because all carbs become sugar in the blood after they're eaten. And, insulin's job is to be the "*blood sugar police*." Sugar (glucose) can't stay in the blood for long or it is very toxic to the body, so insulin delivers the sugar to the cells of the body for energy. When this process works, the body is in balance; we feel good & we look good! But, in 80% of people with chronic weight problems, this insulin/sugar process is faulty. The devastating results include heart disease, obesity, high blood pressure, diabetes, increased risk for cancer & more.

FAT STORAGE...HELP I'M STUCK!

Trouble begins when the insulin doesn't do its job with the blood sugar. It looks something like this: we get home from work and we eat a handful of pretzels & a bagel. Immediately, sugar is released in the blood. The pancreas then releases insulin...now, we're saturated with insulin because we've been sucking on candy all day at work!

Because insulin is such a powerful hormone, too much of it will make the cells shut their doors in protection. When the cells shut the door, the sugar is trapped in the blood instead of being used by the cells for energy. *This trapped sugar becomes a "Code Red" emergency!*

Immediately, the liver will grab some sugar & turn it into waxy fat (cholesterol) packets called *triglycerides*. The rest of the excess sugar gets sent to prison...*the fat cell*...to serve (for some of us) a lifelong sentence! Unfortunately, our bodies respond to crisis by making fat (cholesterol) & storing fat!

INSULIN RESISTANCE...IS THAT MY PROBLEM?

In the hunting/gathering days body fat was protective...food was scarce & energy expenditure was high. But, in our society of overeating & under exercising, this safety feature has turned deadly.

What causes this malfunction in the insulin/sugar process? Some believe it is a genetic predisposition (*Thrifty Gene*) to over release insulin, others propose, it is the result of a chronically poor diet. Either way, the blood becomes saturated with too much insulin.

When it is flooded, the cells shut their doors (receptor sites) in protection & the sugar gets stuck in the blood. Then, because the sugar is stuck, the brain tells the pancreas to release MORE insulin and the problem compounds!...*This is Insulin Resistance*.

Eventually, even the fat cells become resistant causing blood sugar levels to skyrocket to 300 or higher ...*This is Type II diabetes*.

"The beginning is the most important part of the work." Plato

Bristlecone Med-fitness

"Damaging truth, I prefer it to advantageous error. Truth heals the pain which perhaps it evokes." -Goethe

AM I INSULIN RESISTANT?

The Following are signs that you may have a problem with insulin resistance...

- Fasting blood glucose above 80
- More than 20lbs overweight
- Abdominal obesity
- High blood pressure
- High cholesterol
- Hypoglycemia (low blood sugar)
- Cravings for sweet & salty
- Graze eating
- Frequent Hunger
- Family history of type II diabetes & Obesity
- Difficulty with weight despite diet & exercise
- Body fat% above 35%
- Water retention
- Puffy face/eyes

*Current research indicates there is a strong hereditary link for irregularities with blood sugar & insulin. If you have struggled with your weight your entire life, the culprit may be insulin resistance. **If you have an immediate family member who has been diagnosed with Type II diabetes, you are considered high risk for insulin resistance.***

NOW WHAT??

Insulin Resistance & type II diabetes are very preventable. Lifestyle & diet are crucial factors when attempting to control insulin levels. As previously stated, carbohydrates turn into sugar when they are digested. The sugar causes the pancreas to release insulin. Therefore, a diet that controls carbohydrates is essential.

When carbs are cut, protein & fat must be added. Both fat & protein can actually help to reduce insulin levels & stabilize blood sugar. When a person eats meat &/or fat, insulin is not released. In fact, another hormone is released from protein called **Glucagon**. *Glucagon is a fat burner...it helps pull fat from the cells to burn it for energy!* But, be careful with those double bacon/cheese burgers ... a big calorie load will also stimulate the pancreas to release insulin!

Good protein choices include chicken, turkey, fish, pork & eggs. Protein shakes are a good option too as long as sugar content is low.

KEEPING IT STEADY!

The hallmark of good health is stable blood sugar. The brain craves consistent & stable glucose at all times. Unfortunately, when insulin resistance strikes, blood sugar is anything but stable! Instead, it looks more like a roller coaster ride...up & down! **The best way to detect & prevent insulin resistance & diabetes is to watch your fasting glucose.** A healthy fasting glucose registers between 70-80.

Insulin resistance will cause a quick rise & fall of blood sugar resulting in rapid weight gain especially around the stomach. Unstable blood sugar patterns also force the fasting glucose level higher & higher. Once a fasting glucose level reaches 100, a patient is diagnosed as "pre-diabetic." Ironically, this process takes 10-15 years to develop, but rarely do doctors educate about prevention!

~Kelly & Julie