

The Tuesday Minute

Nutritional information.... one byte at a time

This Week's Topic

The Remarkable Hormone . . . Insulin

Here's a test I do with every new patient I see. Many of you use it in your practice, but if you aren't familiar with it you'll be impressed with the implications of such a simple test. Today's Tuesday Minute focuses on that remarkable hormone, insulin.

One of the primary lab tests that can predict longevity is fasting insulin. Research has proven that caloric restriction is the single greatest longevity factor in all the lab animals' studies to date. A big part of why caloric restriction increases longevity is because it lowers insulin levels.

Low fasting insulin levels can be one of the best screens for predicting health and preventing disease. I'll give you some optimal lab values in a minute, but before I do, think about it. What role does insulin play in the body? Remember, insulin is essential to pull sugar or glucose into the cell to keep homeostasis in the blood. The sugar is then burned for energy or stored for later use.

Excess sugar is stored as fat, and for our ancestors that may have been a good thing because they didn't have the instant access to food that we have. But because our culture consumes SO many refined sugars, our very cells try to resist extra sugar intake because they can only store so much sugar as fat in a healthy manner. So, in order to reduce the amount of sugar coming into

the cells, the cells will ultimately reduce the amount of insulin receptor sites.

Well, that's good for the cells, but bad for the bloodstream. Insulin can't get into the cells, so it remains in the blood. Remember, part of insulin's job is to convert sugar to fat wherever it is. So now the excess insulin in the blood causes excess fat in the blood.

Dr. Ron Rosedale in his book "The Rosedale Diet" quotes a study where insulin was dripped into the arteries of dogs and in just a few months the artery became blocked with plaque. Plaque buildup can deprive the heart of blood and oxygen and eventually cause a heart attack.

As a person continues to ingest refined carbohydrates and the insulin continues to be made, it drives the body into a fat storage mode rather than a fat burning mode. We use the term insulin resistance, meaning a healthy cells response to excess refined carbohydrates.

Insulin has many key roles that will not be fulfilled if blood sugars are elevated; let's look at a few of them.

Insulin is necessary to pull magnesium into the cell. Blocked insulin receptor sites in the cell mean low cellular magnesium levels and magnesium is critical for energy production, healthy heart, vascular, and blood pressure regulation.

Excess insulin in the bloodstream causes retention of sodium which in turn causes increases in blood pressure and fluid retention.

There is also a significant correlation between elevated insulin levels and certain types of cancer, namely: breast, colon, prostate, and pancreatic cancer.

Poor sugar regulation and insulin dysregulation has also been indicated in aging, memory problems, fatigue, anxiety and depression, immune suppression, obesity, vascular disease, and as I mentioned heart disease.

I've prepared a chart you can use in your practice. You can get it by clicking on the web page. It lists the lab values I use as a screen for insulin resistance or dysregulation. The fasting insulin levels I like to see should be 10 or lower, under 6 is ideal. Traditional lab values suggest treatment should begin when levels exceed 18; however, if fasting insulin levels are over 10, insulin resistance is well under way and needs serious attention.

Therapeutically, we need to make sure the patient reduces their level of refined and even their starchy carbohydrates until levels are stable and life style changes are made. Exercise is critical for anyone who is struggling with insulin resistance. Cells will burn sugar with activity and movement. So the best way to reduce sugar, (besides not eating it) is to burn it.

Keep in mind, the most stubborn cases of insulin resistance usually involve one or more food allergens, so reducing food allergens can be important.

As far as supplements, there are several options, but let me remind you to start treatment

with the basics and adjust from there as the patient changes their lifestyle.

GlucoBalance is a formula developed by Dr.'s Jon Wright and Allan Gaby as a foundational nutrient: 2-3 capsules tid.

Optimal EFAs are a mixture of Omega 3's and GLA with some flax seed oil to reduce NF-kappa-B: 2 capsules tid.

Bio-D-Mulsion Forte 4,000 IU (some studies show it works as good as medication to reduce blood sugar).

Lipoic Acid: 100 mg tid to prevent neuropathy.

Niacinamide: 500 mg tid to help burn sugars more efficiently.

Magnesium in the form of Mg-Zyme is prescribed to bowel tolerance at bedtime.

As you know, so many botanical agents are available to assist blood sugar regulation; but if the basic building blocks are not available, the herbs may not work as effectively. So diet, healing the gut, exercise, and foundational nutrients will hold a big piece to the insulin resistance puzzle.

Again, I recommend that you order a fasting insulin on all your new patients. Not only will it show markers for longevity, but as you've seen here, it can be a key diagnostic tool.

I appreciate you taking the time to read this week's edition. I'll see you next Tuesday.