

# Don't Wait... Diabetic Screening

*"A recent study showed for every glucose rise of 1 point above 84, it represented a 6% increase risk of developing type 2 diabetes."*

When do you start getting aggressive about preventing and ultimately treating diabetes? Should you wait until your patients have elevated fasting plasma glucose above 125 and hemoglobin A1c levels over 6.5 as the 2012 American Diabetes Association suggests? Or should you begin earlier, but how early?

According to an article in The American Journal of Medicine, June 2008, "Normal Fasting Plasma Glucose and Risk of Type 2 Diabetes Diagnosis," patients should be concerned early rather than later. Authors Nichols, Hillier and Brown showed that "for every glucose rise of 1 point above 84; it represented a 6% increase risk of developing type 2 diabetes." Lest you dismiss this concept or treat it lightly the study was done using 46,578 healthy participants whose initial blood sugar was under 100.

Participants were tracked from 1997 until they devel-



oped diabetes, left the plan or died before the completion of the study in April 2007. Interestingly, "BMI, systolic blood pressure, low-density lipoprotein and total cholesterol and triglycerides all increased with fasting plasma glucose, whereas high-density lipoprotein cholesterol decreased." As you would expect, "in men, as fasting plasma glucose increased so did the incidence of cardiovascular disease and hypertension."

Let's stop for a second and think about what this study is showing because to me it

is a landmark study for those of us who promote and practice wellness.

First it is based on relatively healthy people with blood sugars under 100. Second, it spans a 10 year period. Third, the number of participants the study ended up with is very significant, 46,578. Fourth, these are patients in the conventional health care system.

So "the typical patient who receives average conventional care can expect a rising risk of developing diabetes, 6% for every glucose

rise of 1 point above 84. For example, at a level of 85, the risk percentage is 6%; at 86, 12%; 87, 18% and so on.

Here's another reason to look for pre-diagnostic patterns and treat early. In type 2 diabetics there is a progressive deterioration in beta-cell function. One study showed that islet function was about 50% of normal at the time diabetes was diagnosed. So by watching and waiting as fasting glucose levels increase... 50% of one's pancreas could be deteriorating. The reason for the reduction of beta-cell mass is "accelerated apoptosis," (cell death). The major factors for progressive loss of beta-cell function and mass are glucotoxicity, lipotoxicity, proinflammatory cytokines, leptin and islet cell amyloid.

Once again we see that sugar dysregulation is accompanied or even caused by inflammation. But here is the good news; "Impaired beta-cell function and possibly beta-cell mass appear to be reversible, particularly at early stages of the disease where the limiting threshold for reversibility of decreased beta-cell mass has probably not been passed." You can see a link to the study below but the point is; this is further evidence to reinforce that you are on the right track in your wellness practice. It also reinforces the importance of preventative screening.

We have discussed other blood sugar parameters on other Tuesday Minutes. You can access them below. But what I like about this study is that it gives us a way to articulate and put a definable number to the risk.

Let's say your patient has a fasting glucose level of 90, a safe number by traditional standards; you can confidently say, "Mrs.

Jones you have a 30% greater chance of contracting type 2 diabetes in the next 10 years if you stay on the same health road that you are on. If we wait until you have all the signs of diabetes, you will have lost 50% of your pancreas's ability to function.

But why should we wait? I suggest we get aggressive and increase your core energy and strength levels. That means increasing your levels of real food, increasing your level of movement/exercise and making sure you have the basic nutrients your body needs to maintain healthy blood sugar levels. You will think clearer, have more energy, sleep better, maintain healthy bone structure, lose some weight and have less aches and pains in the process.

We can make small changes to start or we can jump in and make some real life style changes quickly but the important thing is that we get started." Once patients understand that you care about them and their ultimate well being, they will want to become a part of your wellness practice for life.

I don't know about you but I am constantly motivating myself to eat less sugar and exercise more. We all need a place to learn and stay encouraged. Our challenge is too constantly and creatively let our patients know that we have ways to assess and help them stay on track. Yes, we can order more expensive, expansive testing and treat accordingly but simple tests like the fasting glucose level can tell us a great deal about the health journey we and our patients are on.

Thanks for reading this week's edition. I'll see you next Tuesday.