Pastor's Corner – 6-29-2019 – Things I have no business commenting on: Diabetes

My wife and I have a family joke about how we both tend to do things we have no business doing. For example, any time I ask Amy to help in the garden or cook dinner she reminds me she has no business doing those things. Likewise, I've tried my hand at deck building, dry wall, masonry and plumbing – all things for which I have no training – and have no business doing. It usually takes me about 3 tries to get a project right. But I am undeterred! I say this as a kind of disclaimer and to let you know that I have a habit of dipping my toes into topics that I'm not formally trained for. So read the following Pastor's Corner with that in mind.

I'd like to talk a little bit about diabetes. I'm not a doctor (well actually, I am, just not a medical doctor - #humblebrag) nor have I formally studied medicine. But I do read a lot on the internet and if you know now to sift data you actually can learn a lot of good stuff. What I'm saying is that I'm not qualified to give medical advice, I'm not giving medical advice, and if you are planning to put any of this non-advice into practice, talk to your physician first. I feel this disclaimer is important but I'm not sure it's totally necessary. Afterall, Adventist pastors have been giving unqualified health advice since the beginning of our movement (#healthmessage #councilsondiet).

Right, diabetes.

Diabetes, as I understand it, is an insulin disease. Yeah, we focus a lot on blood sugar and even call is "sugar diabetes" but really it's all about insulin. Insulin is a hormone that your body produces that governs your energy transport and storage system. Without insulin our cells don't get fed and our bodies starve from the inside out. Type 1 diabetics are unable to produce insulin naturally and so they must take insulin injections, there's just no way around this. But type 1 diabetes is relatively rare and has a strong genetic component. What most diabetics are dealing with is type 2 diabetes. Type 2 diabetes isn't a result of your body not producing enough insulin, rather is a result of your cells becoming insulin resistant. It's a totally different disease with a totally different cause but it's often treated the same way as type 1. Going forward I'm talking about type 2 diabetes.

Now, we can't talk diabetes without talking about insulin and we can't talk insulin without talking about what triggers your body to produce it – namely carbohydrates. When you eat carbohydrates your body ultimately breaks them down into glucose - this raises your blood sugar. As blood sugar rises your pancreas mobilizes insulin to collect that sugar and deliver it to your cells. You see, your cells like to use glucose as fuel but they aren't good at absorbing it directly. Insulin acts as kind of delivery truck that picks up glucose from your bloodstream, docks with your cells, and unloads its sugary cargo.

In metabolically healthy individuals this system works great. The insulin picks up the excess glucose, delivers it to the cells and keeps everyone nice and happy. But what happens when the insulin tries to deliver its cargo and the cell says, "no thanks, I'm full"? Our cells can only store so much energy, so in that case the insulin drives off to deliver its cargo elsewhere. Long story short, if it can't deliver the glucose to a cell in need the cargo (the glucose) is converted and stored as fat. And there it sits as emergency rations waiting for the day when you don't have access to McD's.

Type 2 diabetes occurs when you constantly flood your body with high levels of carbohydrates which result in chronically high levels of blood glucose. The cells take on as much as they can but after a while they start to straight up ignore the delivery vehicles. They become resistant to insulin and tell the delivery driver take a hike. Since the insulin can't drop off its cargo blood sugar stays high and the pancreas sends out more delivery trucks (more insulin). If this cycle continues for many months or years eventually the pancreas gets over-taxed and can't keep pace and it can't send out enough trucks to manage the glucose load. When that happens you're in diabetes territory and you'll eventually need to inject insulin to pick up that excess sugar and get it safely deposited as fat.

The problem is that insulin resistance is a progressive cycle that only gets worse over time. As your body needs more insulin to deal with the glucose load the cells become more resistant to insulin, which leaves more glucose in the blood, requiring even more insulin to get the job done. This, of course, leads to more insulin resistance, high blood sugar, and the need for more insulin.

The good news is that there is a straightforward way to break this cycle: carbohydrate reduction. Remember, carbohydrates are what start this whole thing off in the first place. Any time you eat carbohydrates your blood sugar rises and your body responds by sending out insulin. So, if you want to stop the insulin resistance cascade (without meds) you have to control carbohydrate consumption. If you stop eating carbohydrates (or severely limit them) your body doesn't need to mobilize insulin because your blood glucose doesn't spike. Over time, your cells can regain their sensitivity to insulin and start to function normally*. But that can only happen if you give them a break.

Type 2 diabetes is often thought of as a blood sugar problem, but it's really an insulin resistance problem. Like an addict who becomes tolerant to higher and higher amounts of drugs, our bodies become resistant to insulin. To regain insulin sensitivity, we have to give the system a break. We have to control our blood sugar by controlling what we put in our mouth.

As a first step, if you have diabetes or are pre-diabetic, avoid eating anything and everything with added sugar. Concentrated sugar dramatically spikes blood glucose. Pretend that stuff is arsenic. Seriously, cut out all foods that have added sugar in any form (start reading labels and you'll be surprised to discover just how many packaged foods have added sugar). This includes "natural" sweeteners like honey or agave. Cut out juice, soda (pop for your northerners), candy, pies, cakes, puddings, pastries and basically all sweets. Those things are all fine in moderation IF YOU ARE METABOLICALLY HEALTHY, but if you are diabetic or pre-diabetic, they are straight up poison. So as a first step, just cut out the sugars.

Once you've cut out sugar, what else can you do to manage your blood sugar? In my next Pastor's Corner I will continue to talk about things I have no business talking about and give some more non-medical advice about how you can take control of this situation. It's more doable than you might think.

Comments? Questions?

Happy Sabbath
Pastor Tyler

*I believe this is the case but I could be wrong. Most of what I've read about "reversing" diabetes features people who cut carb consumption and continue with low carb as a permanent lifestyle. They don't tend to go back to high carb consumption so there isn't a lot of data out there (at least that I've found) about regaining insulin sensitivity.