

Dealing with Diabetes

July, August & September 2013 Now, that's progress!

It is hard to believe that this year I have been a registered nurse at Port Huron Hospital for 25 years! As I look back over the years, I am in awe of the amazing advancements in medical care. In particular to diabetes management, we have certainly come a long way! Let's take a "peek into the past" and see how far we have come in the last 25 years.

Glucose Testing

It may be hard to imagine that urine testing was initially used to determine the level of blood sugars. We did not have meters until 1981 when the first glucose meters were marketed for home use. I remember as a new nurse the meters were very large—not the compact size we have today. It required around 15 microliters of blood, which was a very large blood drop that required a very large finger poke! Today, most meters take 0.3 microliters of blood, which is the size of a pinhead. Testing times used to take up to three minutes as compared to the swift result of five seconds. Meter accuracy has also improved with new strip technology. The lancet devices have smaller, finer needles. It is also hard to believe that back then blood sugars around 200 were acceptable! We now know that pre-meal blood sugars should be in the target range of 70-130 to decrease risk of complications.

Insulin

Before the 1980s, we were unable to synthesize human insulin in the lab. We used a hormone purified from animals. I remember as a new nurse drawing up insulin for my pediatric patients that read "Pork Insulin" or "Beef Insulin". Although this hormone was extremely close to human insulin, it was not an exact match. It caused some allergic reactions leading to rashes. The action of this insulin was also sometimes unpredictable, causing hypoglycemia at varied times. In the 1980's, human insulin could finally be synthesized and was a very close match to the insulin our own bodies produce. The insulin action continued to improve and today we have insulins like Lantus/Levimir and Humalog/Novolog that almost work like a pancreas should!

Continuous Glucose Sensor

In addition to blood glucose monitoring, we now have a Continuous Glucose Sensor that provides a glucose reading every one to five minutes. Using a tiny sensor inserted under the skin, this monitor shows when blood sugar is rising or falling and can be set to alarm when it gets too high or low. Because we can see what our blood sugars are doing between meals and all through the night, doctors and patients can better manage blood sugars with this information. Studies show that wearing a continuous glucose monitor, even for just three days, can result in a lowered A1c level! A decrease of even just one A1c point lowers complication risks by 35%. Port Huron Hospital offers this service through our Diabetes department.

What's Coming?

The future may hold many new exciting developments. There is progress working on noninvasive devices to check blood sugars that use light, electric currents and ultrasound. Finally, a meter that does not need a poke and a blood sample! Also work in progress is the "artificial pancreas" that would be able to regulate blood sugar on it's own.

New Horizons

With so many technologies coming into existence, diabetes care has the potential to become a distant relative of what it was even a decade ago. Technological developments will continue and probably even accelerate given the expected increase in the number of people with diabetes. These advancements can make diabetes control easier, more convenient and more accurate. **So don't stop learning about diabetes!** Take a class if you have never had one or take a refresher class.

Just think: One day your grandchildren may ask you what a blood glucose meter was!

Tina Parmann RN, CDE
Diabetes Educator
Port Huron Hospital Diabetes Education Program

Screenings

BLOOD PRESSURE SCREENING (NO Registration Required)

High blood pressure is referred to as a "silent killer" because it has no symptoms, while damaging your arteries, heart, and other organs. Walk in for a free screening and to learn more about high blood pressure. **FREE**

 Wednesdays, July 10, August 7 & September 4; 8:30 to 10 a.m.; 55 Plus, 1320 Washington Ave., Port Huron

FOOT SCREENING

(Registration Required)

Dr. Anthony Bianchi will be here to answer your questions on your foot problems. **FREE**

Friday, August 9; 9 a.m. to 12 Noon;
55 Plus, 1320 Washington Ave., Port Huron

Upcoming Support Group Meeting Dates

All meetings are 6 - 7 p.m. in the Wismer Third Floor Classroom at Port Huron Hospital

July 16: *Traveling with Diabetes*

August 20: Annual Picnic Potluck
• Bring a dish to pass

September 17: Diabetes Super Foods!