

Diabetes Bites: December, 2010 Edition

Integrated Diabetes Services presents a quick synopsis of the latest diabetes discoveries and happenings brought to you Sarah Kangas MSN, CRNP, APRN-BC, RN, CDE. Send your comments or questions to:

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Diabetes Online!

This month, Integrated Diabetes Services would like to feature a blog with a great name: Texting my Pancreas. It is written by Kim, an Animas Ping and Dexcom-wearing diva-betic for the last 24 years. Her blog is found at <http://www.textingmypancreas.com/> and features stories of blood glucose struggles, successes, and lots of great pictures of her Dexcom CGMS, named Jim. Check it out for some laughs and inspiration.

Get Pumped Up for School!

Yes folks, the rumors are true....Integrated Diabetes is going co-ed and collegiate! In January we will be rolling out "Type 1 University", a series on-line webinars covering the topics you want (and might need!) the most. First quarter courses will include "Mastering Pump Therapy", "Advanced Carb Counting", "Getting the Most from Your Continuous Glucose Monitor", and "Weight Loss for Insulin Users". For a small fee, you can log in and participate in these twice weekly courses and learn the tools to maximize your diabetes control. It's almost up and ready, but check out <http://www.type1university.com/> for more info, or call 1-877-735-3648 and ask to speak with one of our "professors".



In the News



Diabetes Bites is a little tardy with sharing this info, as Diabetes Awareness Month (November) just recently passed, but we wanted to shine a light on the competitive cyclists at Team Type 1, a group of motivated long distance cyclists, all with Type I diabetes, who ride in competitions and fundraise to find a cure for diabetes. This year, starting November 15th, a six man team will travel to Kigali, Rwanda to participate in an 8 day, 1200km professional race. Team Type 1 teamed up with the International Diabetes Federation and many diabetes suppliers, to provide hundreds of children in Rwanda with life-saving diabetes medication and supplies. Their mission?

Team Type 1 strives to instill hope and inspiration for people around the world affected by diabetes. They emphasize that with appropriate diet, exercise, medical treatment, and technology, anyone with diabetes can achieve their dreams! Go Team Type 1!

WORLD DIABETES DAY: Did you wear your blue??

Sunday, November 14th was World Diabetes Day, brought to you annually by the International Diabetes Federation since 1991. This year's topic was focused on 'Diabetes education and prevention'. Key themes at the event were: 1- knowing the signs and symptoms of diabetes, 2 - prevention and treatment is simple and cost-effective, and 3 - enjoying an active life to prevent complications. Until 2006, there was no global symbol for diabetes, however, now the universal symbol for diabetes is a blue circle. The purpose of the diabetes symbol is to give diabetes a common identity, kind of like the red dress campaign for hypertension in women, or the "We support our troops" yellow ribbons. The circle occurs frequently in nature and its significance is overwhelmingly positive. Across cultures, the circle can symbolize life and health. The blue border of the circle reflects the color of the sky and the flag of the United Nations. The United Nations is in itself a symbol of unity amongst nations, and in this case, the unity of all nations to shed light on diabetes. If you check out the website www.worlddiabetesday.com, you will see all kinds of fun pictures posted from around the world because more than 100 countries held an awareness event or activity on World Diabetes Day. You will see



school children in India all wearing blue shirts, or company employees circled in a parking lot with a world diabetes day sign, or a parade of blue-clad policemen in Brazil.

Best of all was the WDD 2010 Monument Challenge. Over 700 monuments and buildings in 76 countries were lit in blue for diabetes. Can you say Blue Sydney Opera House? And in Cape Town, South Africa, they lit Table Mountain blue! If you missed participating, don't worry. November 14th will be back next year and you can proudly support it by wearing blue and sharing information about preventing, treating, and living well with your friends and family.



Getting your Vitamin D?

Vitamin D (also known as calcitriol, Vitamin d₃, or 1,25-dihydroxyoxycholecalciferol) has been a popular research topic over the last 5 years. Vitamin D, which is produced by the skin when exposed to the sun, was used as early as 1921 as a cure for rubbery bone diseases (called rickets in children, osteomalacia in adults). Inactive vitamin D is formed from cholesterol, and waits in the skin until exposure to ultraviolet (UVB) rays, which sets off a chain reaction through the liver and kidneys, where vitamin D is ultimately activated and sent out to the tissues of the body. Vitamin D can also be found in food (especially dairy, liver, egg yolk, salmon, sardines, and trout) and is stored in the fat tissue.

Vitamin D helps the body absorb calcium, hardens bones and teeth, and helps regulate the immune system. So what is the connection to diabetes?? Deficiency of vitamin D has been associated (note: not causative)

with both Type 1 and Type 2 diabetes. Vitamin D is present in the beta cells, and it is theorized that vitamin D has a direct effect on how much insulin the body makes. In an observational study of 10,000 Finnish children taking 2000 IU (International units) daily, the risk of developing Type 1 diabetes was decreased by 80%. Why? Finland gets relatively little sunlight due to its northern latitude. No sun, no vitamin D, less insulin release = higher risk of diabetes. Getting adequate vitamin D is as easy as exposing your arms and legs (without sunscreen) for 5-15 minutes, two to three times a week. In the wintertime, however, it may be easier to take 2000 IU Vitamin D/Vitamin D3 a day. Of course, check with your personal physician (or Nurse Practitioner!) before starting any new medication or supplements, and inquire into having a 25-OH D or 25-vitamin D test to measure your current Vitamin D levels. You might be surprised to find out that you are one of the 50% of all Americans that is vitamin D deficient.

Sweetness Served In Convenient 15 Gram Doses: A Glucose Exposé

Designer Glucose

Many people will avoid eating glucose tabs because they are just “too chalky” or “have bad flavors” and aren’t as delicious as a handful of Skittles.

Well....glucose tabs are dusty and chalky for a few good reasons. **First**, the quickly disintegrating tablet, whether sucked or chewed, breaks down into a powder so fine that glucose absorption actually starts on the side walls of your mouth and under your tongue, TREATING your hypo before you even swallow! **Second**, that less than delicious taste serves a purpose. Got a guess? It keeps you from OVERTREATING your blood sugar. Face it, no one has ever said “Man, I can’t believe I just scarfed down a whole tube of tabs”. The taste is meant to be tolerable, but not soooooo delicious that you eat too many and wind up with a blood glucose of 259 mg/dL, instead of 121 mg/dL. Lastly, dextrose is the most rapidly acting sugar because it is biologically simple and has the largest role in metabolism. In comparison, fructose (commonly found in honey, tree fruits, berries, melons, and some root vegetables) is chemically similar to glucose but is not as easily taken up by the liver, and therefore a slower choice for raising blood sugar. Or sucrose, your basic table sugar, which is made up of one fructose and one glucose molecule, fused together. It takes time for the body to break the sugar molecules apart and release the glucose into the blood stream.



So what is the solution to this chalky and funky flavored dilemma? A little adventuring around your local pharmacy and some experimentation. Everyone is familiar with the standard orange flavored glucose tabs (which personally make me cringe), but did you know that Dex4 also makes raspberry, grape, watermelon, mixed berry, and the new assorted fruit. And don’t be afraid to use the store brand options either; I personally found sour green apple one time at Walmart, and have heard humors of butterscotch. And dextrose isn’t just limited to tablets. New marketing and product development has lead to individual “shots” of 15 grams of glucose in both liquid and gel form. Dex4 now makes a Lemon-Lime and Berry Burst. I found a Walgreens brand Berry Blast Glucoshot liquid and a Tropical Fruit Flavored Glucose gel this month, both made with Dex4 glucose. And it’s impossible to overtreat, because each dose is perfectly proportioned for you!

Managing Your Weight While Controlling Your Lows

You know the symptoms...it starts out with a strange glow on your computer screen, the brain fog, and then the sensation of palpitations and anxiety. You reach for your trusty blood glucose meter and53 mg/dL! Darn, another low. As we all know, having a low blood sugar is more than just annoying and inconvenient—it

can also lead to major calorie consumption as we reach for cans of sodas, bags of pretzels, and handfuls of candy. And everyone has an “I can’t believe I just ate the whole kitchen” story. Over time, overcorrection of these lows can lead to weight gain. Dex4, the makers of the popular fast acting glucose products, is committed to educating people with diabetes about managing their weight while treating lows. To accomplish this, they developed the “Smart Choice Calculator” to show how most common foods used to correct a low compare in calories, and how they contribute to putting on pounds. You can find the “Smart Choice Calculator” at <http://dex4.com/smartchoice/> and make healthy choices about treating your hypos.



Have you been recently diagnosed with Type 1 Diabetes?

A nationwide clinical research study is being conducted to find out whether an investigational agent can help preserve your body's ability to make insulin.

DEFEND2
Durable-response therapy Evaluation
For Early or New-onset type 1 Diabetes

You may qualify if you:

- Are 12 to 45 years of age
- Have been diagnosed with Type 1 Diabetes within the last ten weeks
(Additional study criteria apply)

If you qualify and choose to participate, you will receive an initial consultation, study-related examinations, and investigational agent at no cost to you. Compensation for time and travel will be provided.

For more information about the DEFEND-2 research study, please visit our website at www.DefendAgainstDiabetes.com

Research Updates!

DEFEND-2: Phase 3 Trial of Otelixizumab for Young Adults With Newly Diagnosed Type 1 Diabetes Mellitus.

What is the purpose of this research trial?

DEFEND-2 is a Phase 3 clinical research study evaluating an investigational agent. In type 1 diabetes, beta cells -- the cells that make insulin -- are destroyed by the body's immune system. If this

destruction could be slowed or stopped, the person could continue to make some of their own insulin. The purpose of this study is to find out if a single 8-day course of the investigational agent infusions leads to greater improvement in insulin secretion. DEFEND-2 is a “placebo-controlled study,” meaning some participants will receive the investigational agent and some will receive an inactive substance (placebo). Two-thirds of the participants will receive the investigational agent and one-third will receive placebo. These study agents will be administered as an addition to insulin, diet, and other standard of care treatments.

Inclusion Criteria:

- 12 - 45 years of age and in generally good health
- Have type 1 diabetes
- Have been diagnosed with type 1 diabetes within 90 days of the time you receive the study drug or placebo
- Have required insulin treatment since being diagnosed
- Have evidence of residual beta-cell function (a test will be done to determine this)
- Have a positive test result for one or more of the autoantibodies typically associated with autoimmune diabetes (a test will be done to determine this)

Exclusion Criteria:

- Other, significant medical conditions based on the study doctor's evaluation

For more information see: <http://www.defendagainstdiabetes.com/>

Diabetes Supply Donations

Over the years, Integrated Diabetes Services has accepted donations of pump supplies and distributed them to those lacking insurance coverage. We find ourselves in the fortunate situation of having a surplus of many items, and would gladly donate them to anyone in need. We have supplies for most pump types, including Medtronic, Animas, Disetronic and Deltec. In particular, we have large quantities of the following:

- Deltec Cozmo cartridges
- Animas cartridges
- Non-Paradigm (leur-lock) Sof-Sets
- Non-Paradigm (leur-lock) Quick-Sets
- Leur-Lock angled sets (Comfort, Tender, Silhouette)

Let us know if you can use any of these items. Also, if you have unused/unopened supplies that you would like to donate, including pump supplies, syringes, insulin and test strips, and expired glucagon kits, please drop them off or ship to our office. Thank you!

Don't forget about our Dexcom seven + and Medtronic MiniLink CGMS trials!

Its time for a tune up before the busy holiday season. Two-week Dexcom CGMS and one-week Medtronic CGMS trials are now available for \$249. This price includes all equipment, training, and hook up. Also included is a detailed analysis, as well as feedback and recommendations on how to optimize your glucose control. Call 1-877-735-3648 to schedule.

Retainer Service

IDS offers a retainer service, instead of individual appointment with individual payments, for all of its patients. Whether it be for pregnancy, a new pump start, new diagnosis, or just diabetes maintenance, your retainer entitles you to unlimited access to our staff and monitoring of your blood sugars for a predetermined amount of time. We appreciate email, faxes and snail mail of glucose logs and work with you one-on-one to get your blood glucose numbers under control. Consults may be conducted in-person, or remotely via phone, Skype or live chat. The retainer service also includes regularly scheduled consults to learn advanced self-management techniques and how to trouble shoot any problems. Call our office 1-877-735-3648 for more information.

Support Group Meeting Reminders

DiabetesTech meets *every three months on the first Wednesday evening* of the month to discuss issues pertinent to those using intensive insulin therapy. Topics include research updates, new technologies, management techniques, lifestyle issues and creative problem solving. Each meeting features a guest speaker or interactive activity. Refreshments are served.

CGM Analysis Course: Users of continuous glucose monitoring systems are invited to a free course designed to teach you how to get the most out of CGM. Sponsored by Dexcom, the course is open to users of any type of CGM system. It is held on the *first Wednesday afternoon of every third month* at the IDS office in Wynnewood; feel free to bring your own lunch.

TRIVIA Time

What was discovered by Dr. Frederick Banting and Dr. Charles Best in 1921 at the University of Toronto?

Call Sarah at 610.642.6055 for the answer!

Parting Thoughts....

Although the Thanksgiving turkey, green bean casserole and (sugar-free) pumpkin pie reserves are dwindling, we here at Integrated Diabetes Services would like to say a big “Thank You” to all our wonderful clients and customers, be your home near or far. Without you, we wouldn’t be able to share our knowledge to enrich the lives of others, or to practice what we love.

We are thankful for you!