

Diabetes Matters

Inova

Spring 2012 Vol. 5 Issue 1

Welcome back to Diabetes Matters! In this Spring issue we will explore the following topics:

The Diabetes Epidemic

Hemoglobin A1C

Insulin pens

Dietary Supplements

Upcoming events and announcements

Find us on Facebook!



The IDC Professional Education committee:

Editor: Grace Hoeymans, RN, Clinical Specialist

Jane Crowther, MSN, APRN, BC, CNS

Sherry deMilt, RN, CDE

Sally Guise RD, CDE

Mary E. Sisson, Copy editor

Pat Strainic, RN, CDE

Rochelle M. Tan, MA, RD

The World Diabetes Epidemic: World Diabetes Congress

by Grace Hoeymans RN, Clinical Specialist

- 1 in 10 adults will have diabetes by 2030
- The number of people living with the disease is expected to soar to 552 million by 2030, up from 366 million in 2011
- There are 3 new cases of type 2 diabetes every 10 seconds

The majority of people with diabetes have type 2, which is linked to poor diet, obesity and lack of exercise. The problem is spreading as people in the developing world adopt more Western lifestyles.

World Affect

It was appropriate for the 2012 World Diabetes Congress to be held in Dubai, as the Middle East and North African regions will be hard hit with diabetes over the next two decades.

The International Diabetes Foundation (IDF) is hoping 2012 will be a turning point year for diabetes. Despite the fact that diabetes and its complications (heart disease, stroke, damage to kidneys or nerves, blindness) cause more morbidity and mortality than HIV/AIDS, it still has not achieved global priority status.

At A Glance	2011	2030
Total World population (Billions)	7.0	8.3
Adult Population (20-79 years, billions)	4.4	5.6
DIABETES AND IGT (20-27 years)		
DIABETES		
Global Prevalence (%)	8.3	9.9
Comparative prevalence (%)	8.5	8.9
Number of people with diabetes (Millions)	366	552
IGT		
Global prevalence (%)	6.4	7.1
Comparative prevalence (%)	6.5	6.7
Number of people with IGT (Millions)	280	398

Country/Territory 2011 Millions		Country/Territory 2030 Millions	
1. China	90	1. China	129.7
2. India	61.3	2. India	101.2
3. United States	23.7	3. United States	29.6
4. Russian Fed.	12.6	4. Brazil	19.6
5. Brazil	12.4	5. Bangladesh	16.8
6. Japan	10.7	6. Mexico	16.4
7. Mexico	10.3	7. Russian Fed.	14.1
8. Bangladesh	8.4	8. Egypt	12.4
9. Egypt	7.3	9. Indonesia	11.8
10. Indonesia	7.3	10. Pakistan	11.4

Highlights from the conference included information on: Prediabetes, obesity, medications, technology devices and the artificial pancreas. For more information, go to the International Diabetes Federation website at www.idf.org.

Inside this issue:

World Diabetes	1
The Big Picture: A1C	2
On Pens & Needles	2
Supplements & Diabetes	3
Events/Announcements	4

For questions or comments, contact:

Grace Hoeymans RN, MSN, Editor / grace.hoeymans@inova.org

Diabetes Matters

The Big Picture Lab Test- A1C by Sherry deMilt, RN, CDE

A1C (previously known as Hemoglobin A1C) is a blood test that reflects the *average* blood glucose level over the previous three-month period.

How does the A1C test look backward?
The A1C measures the amount of glucose that is attached to the red blood cells.

When a glucose level is high, more glucose sticks to red blood cells and forms a coating. The coating measured determines the A1C value. Since the lifespan of a red blood cell is 120 days, the A1C value is from the past 120 days.

What is the Target A1C?

A normal A1C is between 4-6 percent. An A1C greater than 6.5 percent indicates the individual probably has diabetes (ADA 2010 criteria). For those living with diabetes, a target A1C level is less than 7 percent.

Daily blood glucose vs. A1C ... There is a link

A daily blood glucose test reflects a one time “snapshot;” the A1C test is the “big picture” looking back over time. Your diabetes team reviews your daily blood glucose levels and A1C in order to adjust medications and manage your diabetes.

Why is A1C control important?

A1C is the gold standard for assessing your complication risk. For every percentage point reduction in A1C levels there is a 35 percent reduction in the likelihood of eye, kidney and nerve damage.

For those with diabetes, an A1C should be drawn every 3-4 months.

For more information visit:

diabetes.niddk.nih.gov/dm/pubs/



Gadgets and Gizmos:

On Pens and Needles by Lori Reffett RD,CDE

A1C level	Average glucose value (plasma)
12	345
11	310
10	275
9	240
8	205
7	170
6	135

Insulin pens provide an easy and precise way to deliver insulin. The pen allows discreet injections without the need for syringes and bottles of insulin. The insulin dose can be dialed up making dosing errors less likely.

An insulin pen looks like an old-fashioned fountain pen. It has a disposable needle on one end and a dial on the other. The pen holds 300 units of insulin and can be reusable or disposable.

Easy steps to pen use:

1. Remove the cap and wipe end of pen with alcohol.
2. Attach a pen needle.
3. Prime the pen by setting the dial for 2 units of insulin and squirting this into the air. This ensures the pen is functioning, and releases air.
4. Finally, dial up the number of units of insulin. This is helpful for patients who have vision problems since they can hear and feel the clicks.
5. Push the needle into the skin and then press the button. After injecting, leave the needle in place while counting to ten. Remove needle from skin by pulling straight up. Once done, unscrew and properly discard of the needle after each use.

Dietary Supplements and Diabetes

By Rochelle Tan, MA, RD

WILL SUPPLEMENTS EACH DAY KEEP DIABETES AT BAY?

Dietary supplements available for patients with diabetes are on the rise. Some dietary supplement ads make the following claims:

- improve blood glucose control
- manage symptoms
- lower complications related to diabetes.

FACT: More than 50 percent of adults report using at least one supplement daily (National Health and Nutrition Examination Survey).

BE A SAFE CONSUMER

- “Natural” on the label does not mean the ingredients are safe.
- Dietary supplements are not FDA-regulated, which means they are not verified for therapeutic use.
- Look for the seal on supplement bottles from the following organizations that will certify dietary supplements for quality, purity, and strength of ingredients:



Safety Warning: Research studies on dietary supplements are *not conclusive*. Supplements should not take the place of prescription medications. Prior to starting any dietary supplement, it is best to consult with your primary physician.

POPULAR DIETARY SUPPLEMENTS: Below are some of the most common supplements found in today's market

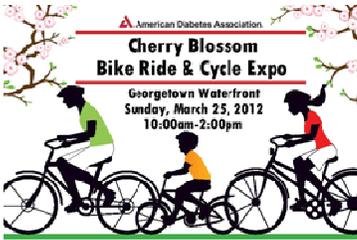
Cinnamon: This popular spice claims to improve blood glucose control by increasing insulin action and decreasing after-meal blood glucoses. The compound coumarin found in cinnamon is also found in warfarin, a blood thinner. **CAUTION:** Do not use with blood thinners.

Vitamin D: This fat-soluble vitamin is an important player in the autoimmune system. Patients with type 1 diabetes are more prone to Vitamin D deficiency and researchers are looking into the correlation between lack of Vitamin D and the onset of type 1 DM. Safe limits for Vitamin D have been established as 4,000IU per day for adults. Vitamin D toxicity can lead to nausea, vomiting, poor appetite, constipation, weakness, and weight loss.

Chromium: This mineral is involved in glucose metabolism and can increase insulin sensitivity. There is no established safe upper limit for this mineral. Certain drugs (i.e antacids, corticosteroids, H2 Blockers, protein-pump inhibitors, beta blockers, insulin, nicotinic acid, and NSAIDs) can impair or enhance chromium absorption and is not recommended in combination with this supplement.

Magnesium: This mineral is involved in the release of insulin from the pancreas and insulin activity. The upper limit for magnesium supplements for adults is 350mg per day, although there is no upper limit established for dietary magnesium. Excessive amounts of magnesium can cause changes in mental status, diarrhea, nausea, appetite loss, muscle weakness, difficulty breathing, low blood pressure, and irregular heartbeat. Magnesium can interact with certain drugs and decrease their effectiveness and absorption (i.e tetracycline antibiotics).

Diabetes Events and Announcements



Cherry Blossom Bike Ride & Cycle Expo, Sunday March 25, 2012, 10:00am to 2:00pm
Georgetown Waterfront Washington D.C. Go to www.diabetes.org/cherryblossom for more information.



Tour de Cure, Sunday June 3, 2012, 6:00 am to 4:00 pm Reston Town Center, Reston, VA. Go to www.diabetes.org/nationalcapitaltourdecure



Inova Diabetes Center

Education Workshop: Inpatient Diabetes Care: Best Practice: Inova Fairfax Hospital, Physician's Conference Center, Lower Level, Friday, April 13, 2012, 8am to 3:30pm, 5.5 contact hours. Contact Roberta McGregor (703) 776-8739 or email Roberta.mcgregor@inova.org to register.

Webinars

By the American Association of Diabetes Educators

Location:

Inova Diabetes Center, 2700 Prosperity Ave., Suite 100, Fairfax, VA

Contact: Pat Strainic 703-698-2505, pat.strainic@inova.org

Time: 1 -2:30 p.m. - CEU's provided!

- 3/20/2012 Cancer and Diabetes Link
- 4/4/2012 Cardiovascular Risk: Diabetes and the New Cardiovascular Guidelines

Preventing Diabetes Classes

•

These are two session classes. Next available classes:

- 3/20/2012 and 3/27/2012 at the IDC Loudoun location.
- 4/14 and 4/21 at the IDC Fair Oaks

Call 1-877-511-4625 to sign up.

NEW TOLL FREE APPOINTMENT LINE FOR INOVA DIABETES CENTER: 1-877-511-GOAL

Inova Diabetes Center (IDC) Locations:

IDC—Fairfax, 2700 Prosperity Avenue, Suite 100, Fairfax, VA 22031 Fax: 703-698-2506

IDC—Alexandria, 4320 Seminary Road, Alexandria, VA 22304 Fax: 703-504-7573

IDC—Fair Oaks, 3700 Joseph Siewick Dr, Ste 408A, Fairfax, VA 22033 Fax: 703-391-3846

IDC—Loudoun, 44045 Riverside Parkway, Leesburg, VA 20176 Fax: 703-858-6357

IDC—Mt. Vernon, 2501 Parker's Lane, Alexandria, VA 22306 Fax: 703-504-7573