NORTHEASTERN PENNSYLVANIA
HEALTH CARE QUALITY UNIT

It's Your Health

Fall 2008

the Advocacy Alliance
Toll Free 1-877-315-6855
www.theadvocacyalliance.org

DIABETES 101

Diabetes Mellitus is a disease that affects the way our body uses digested food for energy. Normally when we eat, food is broken down into glucose, a form of sugar. The glucose then circulates in the blood where it waits to enter cells to be used as fuel. At the same time, specific cells in the pancreas, called beta cells, are responsible for the production of a hormone called insulin.

Insulin works much like a key to unlock the door of the cell. Once insulin 'opens' the cell door, the sugar enters into the cell to be used as energy. A healthy pancreas adjusts the amount of insulin needed based on the level of glucose in the blood stream. With diabetes, either the pancreas doesn't produce any insulin, doesn't produce adequate amounts of insulin, or doesn't use the insulin effectively. When sugar can't get into the cells to provide energy, it builds up in the blood stream and, ultimately, some of that sugar passes out of the body through the urine. The cells do not receive the energy necessary for them to do their job.

TYPES OF DIABETES

There are two main types of full-blown diabetes: Type 1 and Type 2. People with Type 1 diabetes are completely unable to produce insulin. People with Type 2 diabetes can produce insulin, but their cells don't respond to it. In either case, the glucose can't move into the cells and blood glucose levels can become high. Over time, these high glucose levels can cause serious complications. Pregnant women may develop gestational diabetes. Recently, our unhealthy lifestyles have created a new category of diabetes called Pre-Diabetes. Another area of concern is that our children are being diagnosed with Type 2 diabetes, a disease that used to be known as 'adult onset' diabetes.

TYPE 1

Type 1 diabetes was formerly called juvenile onset or insulin-dependent diabetes. This form of diabetes is an autoimmune disease. The body's system for fighting infection (the immune system) turns against the pancreas and destroys the insulin-producing beta cells. The pancreas then produces little or no insulin. A person who has been diagnosed with Type 1 diabetes must take insulin daily to live.

At present, scientists do not know exactly what causes the body's immune system to attack the beta cells, but they believe that autoimmune, genetic, and environmental factors, possibly viruses, are involved. Type 1 diabetes accounts for about 5 to 10 percent of diagnosed diabetes in the United States. It develops most often in children and young adults but can appear at any age.

Symptoms of Type 1 diabetes usually develop over a short period of time, although beta cell destruction can begin years earlier. Symptoms may include increased thirst and urination, constant hunger, weight loss, blurred vision, and extreme fatigue. If not diagnosed and treated with insulin, a person with Type 1 diabetes can lapse into a life-threatening diabetic coma.

Treatment for Type 1 diabetes includes taking insulin, making wise food choices, being physically active, perhaps taking aspirin daily, and controlling blood pressure and cholesterol.

TYPE 2

Type 2 diabetes is the most common form of diabetes. Approximately 90-95% of diabetics have Type 2. This form of diabetes has been known as non-insulin-dependent diabetes mellitus (NIDDM) or adult-onset diabetes. It is typically diagnosed in adults (as opposed to Type 1 diabetes or Juvenile Onset). However, more and more children are being diagnosed with Type 2 diabetes, therefore, the term "Adult Onset" is no longer being used in medical communities.

With this Type 2 diabetes, the pancreas usually produces enough insulin but cannot use the insulin effectively. This is called *insulin resistance*. As the need for insulin rises, the pancreas gradually loses its ability to produce insulin. The result is that glucose builds up in the blood stream and is not being 'escorted' into the cells to be used as energy for that cell to function. The body no longer has an efficient fuel source.

Type 2 diabetes tends to develop gradually and is associated with older individuals, those who are obese, physically inactive, have a previous history of gestational diabetes, family history of diabetes, or belong to certain ethnic groups including African Americans, Hispanic/Latino Americans, American Indians, and some Asian Americans and Native Hawaiians or Other Pacific Islanders. Considering these risk factors, 80% of people with diabetes are overweight.

The symptoms of Type 2 diabetes tend to develop gradually, unlike Type 1 diabetes. The symptoms include fatigue, frequent urination, increased thirst and hunger, weight loss, blurred vision, and slow healing of wounds or sores. Some people have no symptoms.

Gestational Diabetes

Some women develop high levels of glucose in their blood stream during the late stages of pregnancy. Although this form of diabetes usually goes away after the baby is born, a woman who has had gestational diabetes is more likely to develop Type 2 diabetes later.

Pre-Diabetes

Pennsylvania has more than one million people with diabetes and one-third of them are unaware that they have the disease. Because the symptoms develop slowly, many Americans may not be aware that they have high blood sugar levels and actually are "pre-diabetic." This condition is sometimes referred to as impaired fasting glucose (IFG) or impaired glucose tolerance (IGT). Diagnosing pre-diabetes is most successful with the two hour OGTT (oral glucose tolerance test). The CDC recommends people 45 years and older, particularly if their body mass index (BMI) is greater than 25kg or they have other risk factors related to diabetes, be tested every three years.

RESOURCES

National Diabetes Education Program
1 Diabetes Way, Bethesda, MD 20892–3560
Phone: 1–800–438–5383
Internet: www.ndep.nih.gov and www.YourDiabetesInfo.org

To find a clinical trial, check NIH's database at www.ClinicalTrials.gov online.

To participate in studies about Type 1 diabetes, contact:
Type 1 Diabetes TrialNet
Phone: 1–800–425–8361
Internet: www.DiabetesTrialNet.org

The following organizations also distribute materials and support programs for people with diabetes and their families and friends:
American Diabetes Association
National Service Center
1701 North Beauregard Street
Alexandria, VA 22311
Phone: 1–800–342–2383
Internet: www.diabetes.org

Juvenile Diabetes Research Foundation International
120 Wall Street, 19th Floor
New York, NY 10005
Phone: 1–800–533–2873
Internet: www.jdrf.org

What You Can Do

Left untreated, diabetes can have life threatening complications. Taking steps of preventions and early recognition of the disease can improve the quality of life for many.

- Arm yourself with information about hyper (high) and hypo (low) glycemia (sugar) conditions.
- Develop good communication with your primary care physician.
- Schedule annual physicals. Talk with your doctor about your risk of developing diabetes and what you can do to decrease that risk.
- If you are diagnosed with diabetes, become familiar with health conditions associated with your particular diagnosis and how to prevent them.
- Research helpful information (e.g., web, local library, support groups) about insulin, oral medications, blood tests (including the A1c test), managing and checking your blood glucose, and tips on what to expect from your health care provider.

Finding out you have diabetes is scary. Don't panic. People with diabetes can live long, healthy, happy lives.

"A Window To Your Body's Health"
A Look At Dental Health

Did you know that the inside of your mouth is a constantly changing organism? The condition of your mouth lining, gums, and teeth reflect your overall health status and are sometimes the first sign of disease elsewhere. Your mouth is normally teeming with bacteria which are kept under control with daily brushing and flossing. Saliva contains enzymes that are a key defense against bacteria, as well as viruses. When your gums are healthy, a barrier is provided against the entry of oral bacteria into your body. However, gum disease and dental procedures may provide small ports (openings) of entry for bacteria to enter the bloodstream, reaching other parts of your body.

There are several medical conditions known to be linked to oral health: cardiovascular disease; diabetes; osteoporosis; pregnancy; eating disorders; oral lesions/cancer; and HIV. An oral exam during a dental visit may first reveal changes that alert you to the need to follow up with your physician.

Special Challenges for People with Intellectual Disabilities

- Limited jaw mobility and manual dexterity cause the greatest barrier to good oral care – brushing, flossing, and rinsing. The caregiver may need to offer patient physical assistance to the person with these challenges.
- Anxiety and sensitivity to touch and sound make brushing a demanding task for many people. For people who are intolerant of flossing, oral rinsing may be an alternative that should be discussed with the dentist. If a person is unable to swish and spit the dental rinse it may be helpful to apply the rinse directly to the teeth with a brush or Q-tip. Discuss this alternative with the dentist to be certain there are no contraindications. A desensitization program may be considered helpful in easing the stress related to oral care.
- Psychotropic medications can reduce salivary flow and cause the mouth to become extremely dry (xerostomia). These medications can cause increased dental decay and salivary stone formation. Seizure medications can cause overgrowth (hypertrophy) of gingival tissue and inflammation (gingivitis) which may lead to irreversible bone loss and tissue abnormalities (periodontitis). Gingivitis and periodontitis may occur more commonly with certain diagnoses such as Down Syndrome, Prader- Willi Syndrome, and Epilepsy. Regular dental exams will provide vigilance in detecting and preventing these conditions.
- Bruxism is a condition of chronic grinding teeth which wears away the tooth surface. It is seen with greater frequency and intensity in people with intellectual disabilities. It would be beneficial to discuss this condition with the dentist to determine helpful interventions to prevent serious problems.
- Food and pill pocketing may occur when people are unable to chew or swallow normally, causing an accumulation and pouching of food between the gum and cheek. This causes debris to lie against the teeth, which can cause cavities.
- Regurgitation and rumination occur when a person swallows food and then regurgitates the food and stomach acid back into their mouth. This practice can lead to severe indigestion and malnutrition. It produces bad breath and is severely caustic to the lining of the mouth. Excellent oral care is VERY important to keep the oral lining, teeth and gums healthy.
- Open mouth breathing causes decreased salivation and dries the oral mucous lining, making it more fragile and susceptible to gum disease and tooth decay. Offering fluids, rinsing, and mouth care can help diminish this unpleasant state.
- Macroglossia is when the tongue is large and protrudes from the mouth. This condition may cause interference with normal chewing, swallowing, breathing, and lead to excessive drooling. The tongue may become dry, cracked, and ulcerated. Individuals with Beckwith, Morquio, and Down Syndrome often have this condition. A comprehensive oral care plan is needed to prevent a difficult and often painful mouth condition.

It is important for everyone to seriously consider how to promote and maintain good oral health. People with intellectual disabilities, as well as their caregivers, face dental health challenges and need ongoing support to confront the task of providing consistent and thorough oral hygiene. By providing good oral hygiene and having regular dental checkups, you take a big step in preventing physical health problems, linked to poor oral health.

It has been said, "Your eyes are the window to the soul," but, it is also true, **"Your mouth is the window to your body's health."**

CELIAC DISEASE

Celiac disease is a digestive condition triggered by consumption of the protein **gluten**, which is found in bread, pasta, cookies, pizza crust, and many other foods containing **wheat, barley, or rye**. When a person with celiac disease eats foods containing gluten, an immune reaction occurs in the small intestine, resulting in damage to the surface of the small intestine and an inability to absorb certain nutrients from food.

Relation to Developmental Disabilities

The occurrence of Celiac Disease (CD) is genetically linked. It has been reported that it occurs in 4-16% of persons with Down Syndrome. The reasons for that aren't entirely clear, but since persons with Down Syndrome are at a greater risk from auto-immune diseases, celiac disease does represent another one of these type of diseases. Persons with Williams Syndrome and Turner Syndrome are also more vulnerable.

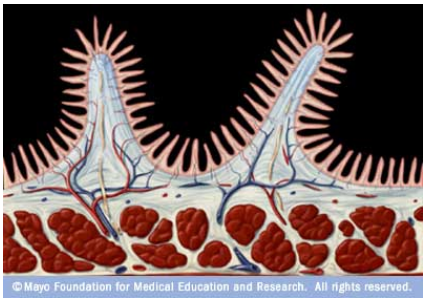
In the general population of the USA, 1 in 133 persons may have celiac disease. If there is a family member (parent or sibling), then 10-15% of the clan is susceptible according to Alessio Fasano, MD, Director of Center for Celiac Research at University of Maryland.

Signs and symptoms

There are no typical signs and symptoms of CD. Most people with the disease have general complaints, such as intermittent diarrhea, abdominal pain ,and bloating. Celiac Disease may also present itself in less obvious ways, including irritability or depression, stomach upset, joint pain, muscle cramps, skin rash (dermatitis herpetiformis), mouth sores, dental disorders, hair loss, and tingling in the legs and feet (neuropathy).

Malabsorption shows itself in:

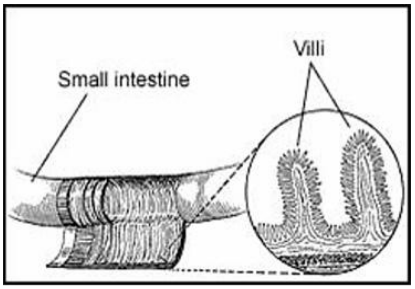
- Weight loss
- Diarrhea
- Abdominal cramps, gas and bloating
- General weakness (anemia)
- Foul-smelling or grayish stools that may be fatty or oily
- Stunted growth (in children)
- Osteoporosis



Your small intestine is lined with tiny hair-like projections called villi, which work to absorb vitamins, minerals and other nutrients from the food you eat.
http://www.mayoclinic.com/health/celiac-disease/DS00319

Cause

First, the disease arises only after exposure to gluten. Secondly, there is usually a genetic predisposition toward a "sensitive" small bowel lining. Third, certain environmental insults may make the lining more susceptible to injury from gluten, such as surgery on the gastrointestinal tract or a gastrointestinal infection. Whatever the initial reason, the gluten causes an immunologic response in the lining of the small bowel. The small intestine is lined with tiny, hair-like projections called villi.



Inside your small intestine

Resembling the deep pile of a plush carpet on a microscopic scale, villi work to absorb vitamins, minerals and other nutrients from the food you eat. Celiac Disease results in damage to the villi. Without villi, the inner surface of the small intestine becomes less like a plush carpet and more like a tile floor and a "malabsorption condition" occurs.

Diagnosis

The surest way to diagnose CD is by biopsy done during an endoscopy. An excellent screening blood test is the **Tissue transglutaminase (tTG)**, which will indicate if there are elevated antibodies. To be diagnosed accurately it is important to be tested before initiating the diet.

- Cookies
- Cakes and pies
- Gravies
- Sauces

Gluten Free Diet

There is no cure for Celiac Disease. The only treatment is a gluten-free diet for the rest of life. Persons can gain relief as soon as 2 weeks after beginning the diet but any cheating or mistakes results in new damage. Adults may need 2-3 years to fully heal. Most foods made from grains contain gluten. **Avoid these foods** unless they're labeled as gluten-free or made with corn, rice, soy or other gluten-free grain:

- Breads, bagels, rolls
- Cereals
- Crackers
- Pasta and noodles

There are **still many basic foods allowed** in a gluten-free diet. These include:

- Fresh meats, fish and poultry (not breaded or marinated)
- Most dairy products
- Fruits
- Vegetables
- Rice
- Potatoes
- Gluten-free flours (rice, soy, corn, potato)

Beware!

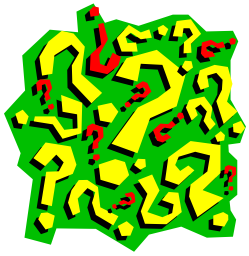
Always read labels. Gluten is often found in food additives, such as malt flavoring and modified food starch. Other surprising sources of gluten include medications and vitamins that use gluten as a binding agent, lipstick, postage stamps and contamination of gluten-free foods with foods containing gluten. Cross-contamination may occur anywhere ingredients come together, such as on a cutting board. Exposure to gluten also happens by using the same utensils as others, such as a bread knife, or by sharing the same condiment containers.

Coping Skills

Living with Celiac Disease isn't always easy. Every day can be a challenge.

- ***Get guidance*** from your doctor and consult with a dietician.
- ***Seek out a support group*** of others with Celiac Disease. Check with your specialist and look online. Join Celiac Disease Foundation and get their starter kit at www.celiac.org.
- ***Practice self-care,*** praising yourself for sticking to the diet and expressing gratitude to your household for helping you.
- ***Don't be afraid*** to share your diet restrictions with others or to suggest a different menu. Friends will be glad you feel better. Eat at restaurants by asking for what you need. Go early to get individualized attention.
- ***Keep learning*** all you can. Collect gluten-free recipes and cookbooks. Read a good book about Celiac Disease (Peter H. R. Green, M.D. and Rory Jones, "*Celiac Disease – A Hidden Epidemic,*" HarperCollins Publishing, 2006). He may also be found speaking online in You-Tube.

http://www.ds-health.com/celiac.htm Accessed 8/8/08

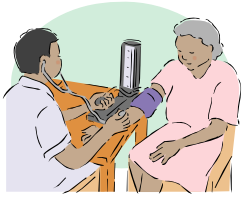


Brain Fade – Disease or Aging?

Where are my car keys? When is my anniversary? Why did I walk into this room? Simple questions like these cause us to question to worry we are facing a future with Alzheimer's Disease or question if we are experiencing the onset of dementia.

Forgetfulness is a normal part of the aging process, often referred to as a "senior moment," though it can even be present in teens and new mothers. Trouble with remembering increases with age and varies among individuals. Many people experience slight memory loss that does not affect their daily lives. Memory loss alone does not mean that you have dementia. Most senior citizens remain alert and able, but may require a longer time to remember or recall information. Cognition may be slower with aging, but accuracy will not be lost. You may forget temporarily where you put your car keys, but eventually you will remember.

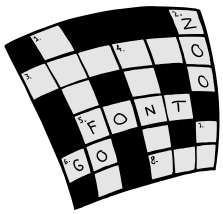
Dementia, a progressive, irreversible decline in mental functioning, is marked by deficits in at least two areas of cognition: memory, attention; language; and problem solving. While there is no cure for dementia, there are a number of preventative measures one can take to delay or minimize symptoms. A main key to ward off forgetfulness and dementia is to engage in an active life, both physically and mentally, and eat a brain-healthy diet.



- Maintain a healthy weight, blood pressure, and cholesterol level, as a link between high blood pressure and dementia has been identified.
- Adopt healthy lifestyle changes (i.e., stop smoking, exercise, get adequate sleep, and medications to treat hypertension and diabetes) to reduce the risk of developing dementia.

- Incorporate a diet low in cholesterol and high in fruits and dark-skinned vegetables that encourage good flow to the brain and reduce the risk of other chronic health conditions (i.e., heart disease, stroke, and diabetes), along with supporting cognition. Long term use of beta-carotene supplements offer additional protection. Omega-3 fatty acids found in cold water fish and antioxidants found in nuts (almonds, pecans, and walnuts) are recommended by the Alzheimer's Association. Abstinence from alcohol and tobacco is advisable.

- Help reduce stress and anxiety. Just the stress of trying to remember the many details of daily activities can cause anxiety and forgetfulness. Get in the habit of using lists, calendars, notes, and schedules as helpful tools to reduce forgetfulness.



- Develop new interests and hobbies and get involvement in activities that stimulate both your body and mind. Stretch and push yourself to the next level by learning something new (e.g., learn a second language). Interestingly, individuals who are bilingual experience at least a four year delay with developing dementia. Memory sharpening skills can be increased with activities such as crossword puzzles, reading, taking classes, playing board games, card games, or going to the theatre.

- Maintain social contacts and encourage mutual participation in interested activities.

There is no magic bullet to guarantee you will never experience brain fade or cognitive decline, but the effort put forth to stimulate cognition is certainly worth the gain of a healthier physical and mental outlook gleaned by employing some or all of these prevention strategies.

Check out these websites mentioned in this edition of "It's Your Health".

www.celiac.org

www.ds-health.com/celiac.htm

www.jdrf.org

www.diabetes.org

www.DiabetesTrialNet.org

www.ndep.nih.gov

www.YourDiabetesInfo.org

www.ClinicalTrials.gov

www.mayoclinic.com/health/celiac-disease/DS00319

P.O. Box 1368
846 Jefferson Avenue
Scranton, PA 18501

the Advocacy Alliance

Ideas for Our Newsletter?

Contact:

Sharon Falzone, Ph.D., Director
Northeastern PA Health Care Quality Unit
Toll-free at 1-877-315-6855 or
sf@theadvocacyalliance.org.