NORTHEASTERN GASTROENTEROLOGY ASSOCIATES

Skilled professionals.
Modern technology.
Unsurpassed patient care.

Celiac Disease (Gluten Enteropathy)

What is Celiac Disease?

Celiac disease is a digestive disorder that damages the small intestine. The disease is triggered by eating foods containing gluten.

When people with celiac disease eat foods or use products containing gluten, their immune system responds by damaging the small intestine. The tiny, fingerlike protrusions lining the small intestine are damaged or destroyed. Called villi, they normally allow nutrients from food to be absorbed into the blood stream. Without healthy villi, a person becomes malnourished, regardless of the quantity of food eaten. Because the body's own immune system causes the damage, celiac disease is considered an autoimmune disorder. However, it is also classified as a disease of malabsorption because nutrients are not absorbed. Celiac disease is a genetic disease, meaning it runs in families.

Gluten is a protein found naturally in wheat, barley, and rye, and is common in foods such as bread, pasta, cookies, and cakes. Many pre-packaged foods, lip balms and lipsticks, hair and skin products, toothpastes, vitamin and nutrient supplements, and, rarely, medicines, contain gluten.

Celiac disease can be very serious. The disease can cause long-lasting digestive problems and keep your body from getting all the nutrients it needs. Celiac disease can also affect the body outside the intestine.

Celiac disease is different from gluten sensitive or wheat intolerance. If you have gluten sensitivity, you may have symptoms similar to those of celiac disease, such as abdominal pain and tiredness.

Celiac disease is also different from a wheat allergy. In both cases, your body's immune system reacts to wheat. However, some symptoms in wheat allergies, such as having itchy eyes or a hard time breathing, are different from celiac disease. Wheat allergies also do not cause long-term damage to the small intestine. Unlike celiac disease, gluten sensitivity does not damage the small intestine.

Most people with celiac disease have one or more symptoms. However, some people with the disease may not have symptoms or feel sick. Sometimes health issues such as surgery, a pregnancy, childbirth, bacterial gastroenteritis, a viral infection, or severe mental stress can trigger celiac disease symptoms.

If you have celiac disease, you may have digestive problems or other symptoms. Digestive symptoms are more common in children and can include: bloating, or a feeling of fullness or swelling in the abdomen , chronic diarrhea, constipation, gas, nausea, pale, foul-smelling, or fatty stools that float, stomach pain, vomiting.

For children with celiac disease, being unable to absorb nutrients when they are so important to normal growth and development can lead to damage to the permanent teeth's enamel, delayed puberty, failure to thrive in infants, mood changes or feeling annoyed or impatient, slowed growth and short height, weight loss. Depending on how old you are when a doctor diagnoses your celiac disease, some symptoms, such as short height and tooth defects, will not improve.

Adults are less likely to have digestive symptoms and, instead, may have one or more of the following: anemia, a red, smooth, shiny tongue, bone or joint pain, depression or anxiety, dermatitis herpetiformis, headaches, infertility or repeated miscarriage, missed menstrual periods, mouth problems such a canker sores or dry mouth, seizures, tingling numbness in the hands and feet, tiredness, weak and brittle bones.

Adults who have digestive symptoms with celiac disease may have: abdominal pain and bloating, intestinal blockages, tiredness that lasts for long periods of time, ulcers, or sores on the stomach or lining of the intestine.

Celiac disease also can produce a reaction in which your immune system, or your body's natural defense system, attacks healthy cells in your body. This reaction can spread outside your digestive tract to other areas of your body, including your bones, joints, nervous system, skin (dermatitis herpetiformis), and spleen. Because the body's own immune system causes the damage, celiac disease is considered an autoimmune disease. However, it is also considered a disease of malabsorption because often regardless of the quantity of food eaten, nutrients are often not absorbed.

Diagnosis

Recognizing celiac disease can be difficult because some of its symptoms are similar to those of other diseases. As a result, celiac disease is commonly underdiagnosed or misdiagnosed. Sometimes celiac disease is confused with irritable bowel syndrome (IBS), iron deficiency anemia caused by menstrual blood loss, Crohn's disease, diverticulitis, intestinal infections, and fibromyalgia or chronic fatigue syndrome.

People with celiac disease have higher than normal levels of certain autoantibodies in their blood. Antibodies are protective proteins produced by the immune system in response to substances that the body perceives to be threatening. Autoantibodies are proteins that react against the body's own molecules or tissues.

There are a variety of tests for celiac disease. A physician may order one or more blood tests to measure levels of the following antibodies: Immunoglobulin A (IgA), Anti-tissue transglutaminase (tTGA), and IgA anti-endomysium antibodies (AEA).

Before being tested, one should continue to eat a regular diet that includes foods with gluten, such as breads and pastas. If a person stops eating foods with gluten before being tested, the results may be negative for celiac disease even if celiac disease is actually present.

Depending on the results of the blood tests, physical findings, and the severity of symptoms, a doctor may recommend a small bowel biopsy. A small bowel biopsy is considered the “gold standard” for making a definitive diagnosis of celiac disease and may be necessary if the results are unclear.

During the biopsy, the doctor removes a tiny piece of tissue from the small intestine to check for damage to the villi. To obtain the tissue sample, the doctor eases a long, thin tube called an endoscope through the mouth and stomach into the small intestine. Using instruments passed through the endoscope, the doctor then takes the sample.

Screening for celiac disease involves testing for the presence of antibodies in the blood in people without symptoms. Americans are not routinely screened for celiac disease. Testing for celiac-related antibodies in children less than 5 years old may not be reliable. However, since celiac disease is hereditary, family members, particularly first – degree relative, meaning parents, siblings, or children of people who have been diagnosed, may wish to be tested for the disease. About 5-15% of an affected person’s first-degree relatives will also have the disease. About 3-8% of people with Type I diabetes will have biopsy confirmed celiac disease, and 5-10% of people with Down syndrome will be diagnosed with celiac disease.

It is important to realize that when you undergo these diagnostic tests, you must be on a diet containing gluten. If you are eating a gluten free diet and are tested for celiac disease you have eliminated the sensitivity of detection for celiac disease and have set yourself up for a negative test result. Within weeks on a gluten-free diet, the antibody response is diminished. If you have been on a gluten-free diet for 6-12 months, approximately 80% of people will lose their antibody response. At 5 years, the number is in excess of 90%.

Celiac Disease Treatment

The.only.treatment.for.celiac.disease.is.to.follow.a.gluten_free.diet.(GF.diet)¡.When.a.person.is.first.diagnosed.with.celiac.disease?working.with.a.dietitian.can.be.very.helpful.for.establishing.a.gluten_free.plan¡.A.dietitian.can.help.someone.learn.how.to.read.ingredient.lists.and.identify.foods.that.contain.gluten.in.order.to.make.informed.decisions.at.the.grocery.store.and.when.eating.out¡

For most people, following a gluten-free diet will stop symptoms, heal existing intestinal damage, and prevent further damage. Improvements begin within days of starting the diet. The small intestine is usually completely healed in 3-6 months in children and younger adults and within 2 years for older adults. Healed means a person now has villi that can absorb nutrients from food into the blood stream.

In order to stay well, people with celiac disease must avoid gluten for the rest of their lives. Eating any gluten, no matter how small an amount, can damage the small intestine. The damage will occur in anyone with the disease, including people without noticeable symptoms. Depending on a person's age at diagnosis, some problems will not improve, such as delayed growth and tooth discoloration.

Some people with celiac disease show no improvement on the gluten-free diet. This condition is called unresponsive celiac disease. The most common reason for poor response is that small amounts of gluten are still present in the diet. Advice from a dietitian who is skilled in education patients about the gluten-free diet is essential to achieve the best results.

Rarely, the intestinal injury will continue despite a strictly gluten-free diet. People in this situation have severely damaged intestines that cannot heal. Because their intestines are not absorbing enough nutrients, they may need to receive nutrients directly into their bloodstream through a vein, or intravenously. People with this condition may need to be evaluated for complications of the disease. Researchers are now evaluating drug treatments for unresponsive celiac disease.

The internet contains information about celiac disease, some of which is not accurate. The best people for advice about diagnosing and treating celiac disease are one's doctor and dietitian.

Complications of Celiac Disease

Damage to the small intestine and the resulting nutrient absorption problems can put a person with celiac disease at risk for malnutrition, anemia, and several other diseases and health problems.

- Lymphoma and adenocarcinoma are cancers that can develop in the intestine.
- Osteoporosis is a condition in which the bones become weak, brittle, and prone to breaking. Poor calcium absorption contributes to osteoporosis.
- Miscarriage and congenital malformation of the baby, such as neural tube defects, are risks for pregnant women with untreated celiac disease because of nutrient absorption problems.
- Short stature refers to being significantly under the average height. Short stature results when childhood celiac disease prevents nutrient absorption during the years when nutrition is critical to

a child's normal growth and development. Children who are diagnosed and treated before their growth stops may have a catch-up period.

Without treatment, people with celiac disease can develop complications like cancer, osteoporosis, anemia, and seizures.

Resources¿
http¿ from.your.doctor¡com.
https¿ www¡niddk¡nih¡gov health_information health_topics digestive_diseases celiac_disease Pages all_content¡aspx.
http¿ www¡medscape¡com viewarticle 465052(8.