

Gluten Allergy

How common is gluten allergy?

Food allergies are common. 2% of adults and 8% of children have food allergies. About 1% of the population suffers from Celiac disease. It is a form of delayed allergic reaction to gluten. Gluten is a protein fraction found in cereals like wheat, barley and rye. This delayed reaction should be differentiated from immediate type allergic reactions to wheat. Wheat is one of the 8 common foods causing immediate type of food allergic reactions. Celiac disease is more common than Crohn's disease, multiple sclerosis, Parkinson's disease and Cystic Fibrosis combined together. According to the Celiac Disease foundation, more than 97% of patients with Celiac Disease go undiagnosed!

How does Celiac disease manifest?

True gluten allergy causes damage to absorptive villi in the small intestine. This leads to foods being not properly absorbed (malabsorption) and causes steatorrhea- where the stools are bulky, greasy, very foul smelling, float on water and difficult to flush. This results in loss of appetite, weight loss, fatigue and wasting, abdominal discomfort and bloating, bone loss and fractures, irritability and even depression, anemia, vitamin and iron deficiencies and infertility. In the long term it could lead to development of lymphoma (a form of cancer) of the small intestine. Fortunately this serious complication is rare, affecting about 1% of Celiac disease sufferers. Celiac disease can be associated with neurological problems including ataxia (loss of balance), polyneuropathy (disease of the nerves) and epilepsy, heart problems including pericarditis (inflammation of outer covering of the heart) and cardiomyopathy (disease of the heart muscle), thin dental enamel, recurrent abortions (miscarriage), fatty liver resulting in abnormal liver function and mouth sores. It can be associated with other autoimmune diseases like thyroid disease, pernicious anemia, diabetes (type 1) and fibromyalgia and chronic fatigue syndrome. Lactose intolerance can be one of the manifestations of Celiac disease.

How is Celiac disease diagnosed?

Celiac disease is diagnosed by doing blood tests- Celiac disease antibody panel consisting of Endomysial antibody (EMA-IgA), Tissue transglutaminase antibody (tTG - IgA/IgG), Anti-gliadin antibody (AGA-IgG, AGA-IgA) and total serum IgA. It is very important to measure total serum IgA level because 1/700 people have deficiency of IgA and if this is not known, diagnosis of some cases of celiac disease will be missed. Once the blood test comes back positive for Celiac disease, then the patient should be evaluated by a gastroenterologist by endoscopy and small intestinal biopsy. The biopsy may show blunting of villi, mucosal damage and presence of chronic inflammation. Then the diagnosis is confirmed. Your doctor may also order other tests to rule out coexisting conditions mentioned above. Genetic blood tests are available to rule out Celiac disease in suspected individuals. However the genetic tests can not diagnose (rule in) Celiac disease.

How is Celiac disease treated?

Once celiac disease is confirmed, then treatment involves life-long avoidance of gluten containing foods. Product labels may or may not mention “Gluten Free” and this may pose a big problem for the allergy sufferers. Gluten may be used as a stabilizing agent in ice creams and ketchup where it may be unexpected. Requirements for proper labeling are being formulated by the USDA.

Immediate type allergic reactions to wheat

Wheat allergy causing immediate type reactions (rash, hives, itching, swelling, tightness of throat and chest, shortness of breath, stomach cramps, drop in blood pressure etc.) can be diagnosed by doing regular allergy skin tests and blood tests for food allergy. It is important to emphasize that regular allergy skin or blood tests do not help in diagnosing Celiac disease. If immediate type allergy to wheat is confirmed after testing, strict elimination of wheat containing foods is the only treatment option. Immediate type allergy to wheat often resolves with time after strict elimination of wheat from the diet.

Dermatitis Herpetiformis- another form of gluten allergy

Dermatitis herpetiformis is closely related skin disorder caused by gluten allergy as well. It causes intensely itchy and blistering skin lesions affecting face, elbows, buttocks and knees. 80% of people with Dermatitis Herpetiformis also have Celiac disease. The diagnosis is established by doing blood tests for Celiac disease and confirming the diagnosis with immunofluorescent studies involving skin biopsy. Treatment is by strict elimination of all gluten containing foods. This often results in significant improvement of itching. Dapsone- a drug related to sulfa is used effectively to treat this condition. However G6PD deficiency- an enzyme deficiency involving red blood cells should be ruled out before starting Dapsone. Otherwise significant hemolysis (destruction of red blood cells) and anemia may follow. Topical and systemic steroids may also help!

You can learn more about Celiac disease by visiting the web site maintained by the Celiac Disease Foundation at www.celiac.org

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