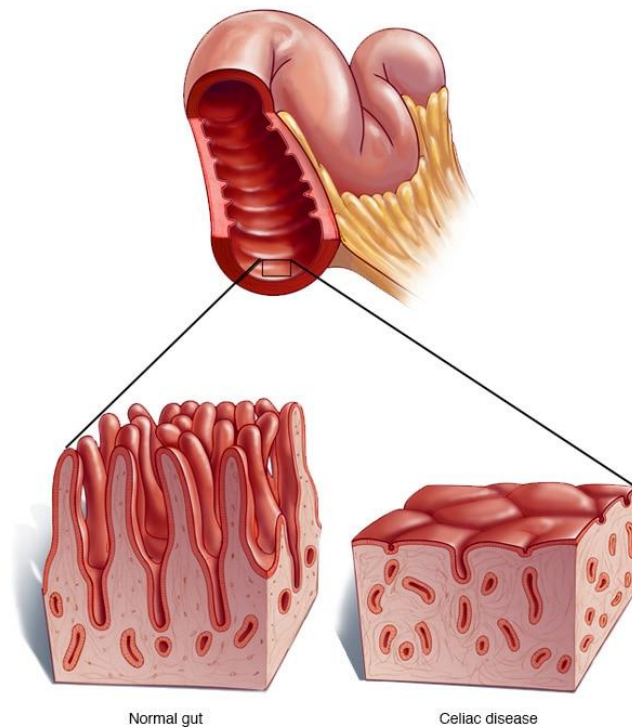


Functional foods
Nutrition Dept- 2nd stage
EXPERIMENT (4)

CELIAC DISEASE

Celiac disease occurs when the immune system attacks the small intestine after exposure to gluten (a protein found in wheat, rye and barley). This causes inflammation and damage to the small intestine, which can prevent the absorption of water and nutrients into the body. Celiac disease is also known as coeliac disease, celiac sprue, non-tropical sprue, and gluten sensitive enteropathy. Celiac disease is hereditary, meaning that it runs in families.



About 1 in 10 people with a first-degree relative with celiac disease (parent, child and/or sibling) will develop celiac disease. Celiac disease is estimated to affect 1 in 100 people in the United States and its incidence appears to be rising. In addition, 2.5 million Americans are undiagnosed and may be at risk for long-term health complications.

Celiac disease can develop at any age, affecting both children and adults. Left untreated, celiac disease can lead to additional serious health problems. These include nutritional deficiencies, anemia, increased risk of infections, osteoporosis, dermatitis herpetiformis (an itchy skin rash), infertility or miscarriage, neurological conditions including seizures and migraines, and intestinal cancers.

Functional foods
Nutrition Dept- 2nd stage
EXPERIMENT (4)

Currently, the only treatment for celiac disease is lifelong adherence to a strict gluten-free diet. People living gluten-free must avoid wheat, rye and barley, found in many foods including bread, pasta and beer. Gluten is also used commonly as a filler in many processed foods. With the increased marketing and development of gluten-free foods, a gluten-free diet has become easier to follow. However, many people with celiac disease still find the diet restrictive and difficult to follow, especially when eating outside their home. In addition, the majority of people with celiac disease continue to demonstrate evidence of ongoing intestinal damage even while attempting to adhere to a strict gluten-free diet.

Thus, there is a clear need for adjunctive therapies in the treatment of celiac disease. There are additionally some people who may have “gluten intolerance” without having celiac disease. These people may experience symptoms of abdominal pain, bloating, diarrhea or fatigue when they eat a diet containing gluten. While these are common symptoms of celiac disease, these individuals do not have the characteristic small intestinal damage or tissue transglutaminase (tTG) antibodies found in celiac disease.

It is not yet clearly understood what causes non-celiac gluten intolerance. Some experts have suggested that many symptoms attributed to gluten intolerance may be caused by FODMAP (fructose, oligosaccharides, disaccharides, monosaccharides and polyols)-containing foods that are largely eliminated in gluten-free diets. Celiac disease is restricted to people with certain HLA class II genes. About 40 percent of people have these genes but only one percent gets the disease.

This suggests that there are other important genetic or environmental factors that play into the immune reaction in celiac disease.

SYMPTOMS OF CELIAC DISEASE

Celiac disease can be difficult to diagnose because it may affect many organ systems outside the intestines. Some people with celiac disease have no symptoms. However, all people with celiac disease are at risk for long-term complications, whether or not they display any symptoms.

Does My Child Have Celiac Disease?

Digestive symptoms are more common in infants and children. Here are the most common symptoms found in children:

- 1- abdominal bloating and pain
- 2- chronic diarrhea
- 3- vomiting
- 4- constipation
- 5- pale, foul-smelling, or fatty stool
- 6- weight loss