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INTESTINAL DISEASES(COELIAC DISEASE)

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ABSTRACT

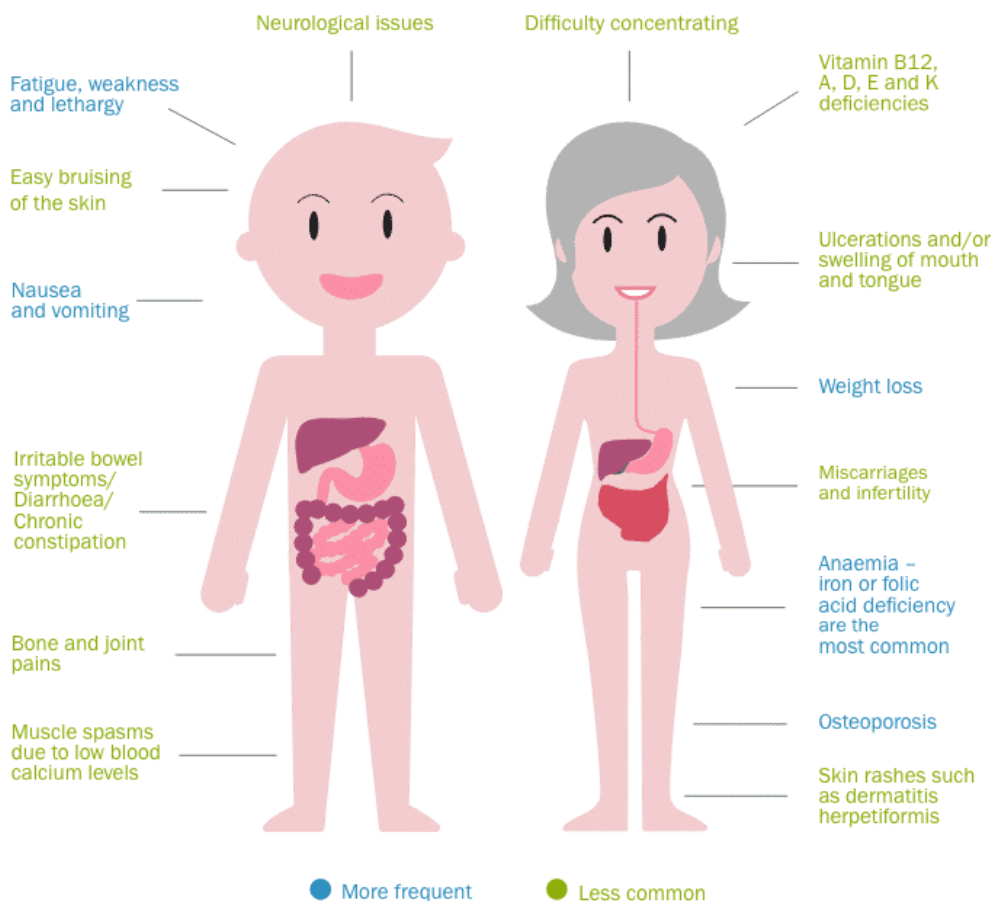
Relating to dietary gluten found in wheat, rye, and barley, celiac disease is an immune-mediated enteropathy and one of the most prevalent lifelong food-related disorders around the globe. In addition to enteropathy, celiac disease is also thought to be a systemic disorder marked by a variety of gluten-related signs and symptoms as well as disease-specific antibodies. When gluten is consumed, it produces toxic gluten peptides that can trigger both innate and adaptive immune responses in those who are susceptible. The clinical presentation vary greatly; patients may present with extraintestinal symptoms, severe gastrointestinal symptoms, malabsorption, or no symptoms at all. Its complicated clinical presentation makes diagnosis difficult, and celiac disease is significantly underdiagnosed. Combining small gastrointestinal mucosal histology during a gluten-containing diet with coeliac disease serology allows for the diagnosis of the condition. A strict lifelong gluten-free diet is currently the only effective treatment for celiac disease; however, the diet is demanding and avoiding gluten is challenging. It takes ongoing research and patient and healthcare professional education for effective diagnosis and treatment for celiac disease. Pronounced SEE-lee-ak, celiac disease is an autoimmune condition. Gluten, even trace amounts, damages the lining of the small intestine in people with celiac disease. Grain products including wheat, rye, barley, and oats contain the protein gluten. Coeliac disease affects people of all ages and genders. It runs in families and can develop at any age from infancy to adulthood. Currently, the only available treatment is with a gluten-free diet. Early diagnosis and treatment of coeliac disease significantly reduces the risk of most complications.

HOW CAN COELIAC DISEASE AFFECT YOU? If you look under a microscope at a normal small intestine, you will see a large number of tiny projections that resemble fingers protruding from the surface. These are called villi, and they are meant to help us absorb more nutrients from our food. A person with celiac disease will have shorter, stubbier villi due to inflammation-induced damage, which reduces the amount of nutrients that enter the bloodstream. In more severe cases, they are hardly visible at all, giving the appearance of a flat intestine lining. This is known by doctors as villous atrophy. Diagnosing celiac disease requires an understanding of villous atrophy. The villi can heal in people with celiac disease if they cut out gluten. The primary modalities of celiac disease the body is:

- Physical discomfort: bloating, abdominal discomfort, diarrhoea, unexplained weight loss.
- Shortage of essential nutrients: this can lead to other conditions such as osteoporosis or anaemia

CAUSES OF COELIAC DISEASE . We do not know why people develop this condition but there are many theories. Most doctors believe that a factor in our genes determines whether our intestines become sensitive to gluten. Like many illnesses, coeliac disease can run in families and the specific genes are now being identified.

Symptoms in Adults



WHAT ARE THE USUAL SYMPTOMS OF COELIAC DISEASE? The symptoms that one experiences vary greatly. Children may experience vomiting, diarrhea, or a failure to gain weight. There are many different ways that the disease presents itself to a doctor in adulthood. The condition coupled with bloating or abdominal pain is a common symptom. Most of the time, patients don't exhibit any symptoms that could be related to their digestive



system, but if tests reveal anemia or osteoporosis—a condition where the bones are thin—coeliac disease is suspected. Due to damaged villi, patients may develop blood and bone diseases because they are unable to absorb iron, calcium, and several vitamins from their diet. In other instances, people experience vague symptoms of illness or lose weight without first any apparent cause. Many patients have only mild symptoms. HOW IS COELIAC DISEASE DIAGNOSED? The doctor will carry out an examination and take a medical history. If they suspect coeliac disease, further tests will be carried out:

- Blood tests: these will be looking for antibodies indicative of coeliac disease and must be done whilst gluten containing food is still being eaten. However, a positive blood test does not confirm the diagnosis beyond doubt.
- Endoscopy: this will be carried out if the result is positive, or in situations where the blood test is negative but there is still a possibility of coeliac disease. A thin, flexible tube is inserted through your mouth, down your digestive tract, and into your small intestine during an endoscopy, where biopsies are taken. While the process may be uncomfortable, neither taking a sample of tissue nor passing the tube are painful. The villi's abnormality and the diagnosis will be confirmed by the biopsy samples. If the diagnosis was unclear, a second endoscopy and biopsy might occasionally be recommended. A perpetual special diet is required for the treatment of coeliac disease, and receiving a diagnosis with confidence is vital. Only endoscopy is an option.

WHAT TREATMENT IS AVAILABLE FOR COELIAC DISEASE? Eat nothing that contains gluten as part of your treatment for coeliac disease. That would entail living a lifelong gluten-free diet. In the event that you are diagnosed with coeliac disease, your physician will advise you to speak with a dietitian because following a gluten-free diet necessitates understanding which foods are gluten and how to eat a balanced diet. The dietitian will offer written guidance and facts.

WHAT IS A GLUTEN FREE DIET? Any food prepared with wheat, rye, or barley contains gluten. Cakes, pastries, and bread are all made with flour, which has a high gluten content. Wheat, rye, and barley are all frequently employed to make breakfast cereals, but many other foods unintentionally turn out to contain gluten. For instance, barley is used to make all beers and lagers, while flour is used to thicken many cooking sauces. On occasion, during processing or production, tiny amounts of gluten can contaminate certain foods. While it's thought that oats don't hurt those who have coeliac disease, there is a chance that some oat-based products include gluten, which makes them dangerous to consume. It is worthwhile to acquire the skill of label-reading such products to see if they are gluten-free. For those with coeliac disease, a large range of substitute gluten-free products are available. To assist those with coeliac disease in adhering to a strict gluten-free diet for the rest of their lives, a variety of specialty substitute staple gluten-free foods are available on prescription from the doctor. An independent panel that advises the Department of Health, known as the Advisory Committee on Borderline Substances (ACBS), has approved a list of staple foods that serve as the cornerstone of a diet rich in nutrients.

What are the symptoms of coeliac disease? People with coeliac disease can have severe symptoms, or they may have no obvious symptoms at all.

Common symptoms that affect the gastrointestinal tract (gut) include:



- diarrhoea or constipation
- bloating
- fatty stools (steatorrhoea)
- nausea
- vomiting
- flatulence (passing wind)
- feeling pain or discomfort in the tummy
- Other symptoms and problems can include:
 - low weight or slow weight gain in children
 - feeling tired all of the time
 - weight loss
 - severe or persistent mouth ulcers
 - irritability and depression
 - failure to thrive, developmental delay or delayed puberty in children
 - unexplained iron, vitamin B12 or folate deficiencies
 - autoimmune thyroid disease

Many of these symptoms are very common and can occur because of other conditions. However, coeliac disease is under-diagnosed, so it's important to consider it as a possible cause of your symptoms.

The most common symptoms in children less than 5 years of age are:

- diarrhoea
- irritability
- weight loss and slow growth

In older children, abdominal (tummy) pain is the most common symptom.

Up to half of people with coeliac disease don't have symptoms. Even if you have no obvious symptoms, there may still be damage to your bowel.

Risk factors. The causes of the fluctuating and rising incidence of coeliac disease are still unknown. The frequency of the HLA haplotypes that predispose to coeliac disease varies throughout the world, but coeliac disease prevalence varies even among populations that share a similar HLA background. Rather than being due to genetics, environmental factors may account for this variance. Potential environmental causes include eating gluten-containing cereals, contracting an infection as a young child, having a lower socioeconomic status, and living in an unsanitary environment. It is crucial to keep in mind that the age distribution of the study individuals may have an impact on the prevalence rates of coeliac disease. Also noteworthy is that the prevalence of coeliac disease varies according to sex, being more common in female individuals. Finally, the presence of certain disorders is associated with an increased risk of developing coeliac disease.

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