

272/H2 opposite Emporium Mall Gate \#1, Johar Town, Lahore www.homemadecuisine.biz

## What is Celiac Disease?

Celiac disease is an autoimmune disorder that occurs in people who are genetically predisposed. When people with celiac disease eat gluten, a protein found in wheat, barley, and rye, their body mounts an immune response that attacks the small intestine. These attacks lead to damage on the villi, small fingerlike projections that line the small intestine, that promote nutrient absorption.

Celiac disease is hereditary and can develop at any age after people start consuming gluten. Gluten in the digestive system triggers the immune system to produce antibodies that damage the lining of the small intestine impairing its ability to absorb nutrients from food, causing nutritional deficiencies.

## Symptoms of Celiac Disease

Fatigue
Cold Hands
Brittle or Concave nails
Headaches or Migraine

Mouth Sores

Other symptoms of Malnutrition

Bloating, Diarrhea, Constipation, Gas

Loose, greasy stools

## Depression \& anxiety

## Weakness \& Fatigue

## Paler Complexion

Joint Pain

Children with celiac disease may have problems absorbing nutrients at a time when they are so important to normal growth and development, which can lead to damage to the permanent teeth's enamel.

Celiac disease may also affect other parts of the body, such as the skin, joints, and reproductive organs

## How can celiac disease be cured?

Unfortunately, there is no cure for this disorder and it can only be managed by consuming a gluten-free diet.

Additionally, there are a number of medications and supplements that can be used to alleviate some of the symptoms of celiac disease. For example, vitamin and mineral supplements can help to add important nutrients that may have been lost due to gluten avoidance. Additionally, probiotics have been found to have an effect on the digestive system and may help to reduce symptoms.

Ultimately, the best way to manage celiac disease is by following a strict gluten-free diet and talking to your doctor about any medications or supplements that may be beneficial.

Naturally gluten free foods

| Eggs | Plain Milk | Fruit | Meat |
| :---: | :---: | :---: | :---: |
| Chicken | Natural Juices | Pulses | Nuts |
| Vegetables | Seeds | Fish | Potatoes |
| Yoghurt | Cheese | Butter | Plain Cream |
| Rice | Corn | Millet | Sorghum |

These are some foods that are naturally gluten free. However, it is important to make sure they are not processed in an environment contaminated with gluten based products. For example, if eggs are made on a stove where wheat bread was toasted, the eggs will become contaminated and therefore will not be gluten free.

Ingredients to avoid:

| Wheat \& its various varieties | Barley | Rye |
| :---: | :---: | :---: |
| Oats (unless gluten free labelled) | Triticale | Malt |

Oats are naturally gluten free, however they are mostly grown in an environment contaminated with wheat. Therefore, only consume oats that have been grown and processed with care to avoid gluten contamination.

## How common is celiac disease?

In Pakistan, studies have not been conducted to estimate the total amount of celiacs but the number has been slowly increasing due to more awareness amongst doctors and the population. However, we can take a look at other countries to make an estimate.

## How can celiac disease be diagnosed?

Celiac disease can be diagnosed through a combination of blood tests, biopsy, and/or genetic testing. Blood tests can measure the levels of certain antibodies that are only present if a person has celiac disease.

A biopsy involves taking a small sample of tissue from the small intestine to confirm whether a person has villous atrophy, a common symptom of celiac disease. Genetic testing can identify if a person carries one of the two known gene mutations associated with celiac disease.

In order to accurately diagnose celiac disease, a person should visit their doctor and provide a detailed medical history, including any family members who have been diagnosed with celiac disease. The doctor will then order the appropriate tests and work with the patient to determine the best course of action.

## Can a celiac also develop other diseases?

Yes, celiac disease patients can be at an increased risk of developing other diseases or conditions. For example, they may be more likely to develop:

- type 1 diabetes
- anemia
- osteoporosis
- thyroid disease, and some autoimmune conditions.

Additionally, celiac disease can increase the risk of certain types of cancer, such as lymphoma and intestinal cancer.

It is important for celiac disease patients to maintain a healthy and well-balanced diet to reduce their risk of developing additional health issues. Furthermore, regular check-ups with a doctor can help to monitor the overall health of the patient and identify any potential issues before they become more serious.

## What everyday foods need to be avoided on a GF diet?

Common foods such as bread, pasta, roti, parathas, cereals, biscuits, wafers, cakes, and other desserts are often made with gluten containing grains such as wheat, and barley. Therefore, these foods need to be avoided unless they are made using gluten-free grains/ingredients.

Gluten Free Items available in Pakistan through various brands:

| Bread | Pasta | Roti | Parathas |
| :---: | :---: | :---: | :--- |
| Puri | Naans | Cakes | Biscuits |
| Desserts | Breakfast Cereal | Mithai | Samosas |
| Nuggets | Burgers | Pizza | Sandwiches |
| Gol Gappas | Waffle Cones | Condiments | Flours |

common branded items that are gluten free in Pakistan:



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