How is Celiac Disease Treated?

1. What is the treatment for celiac disease?

Celiac disease (CD) is a chronic (life-long) condition. The only current treatment for CD is a gluten-free diet (GFD) which strictly eliminates wheat, rye, barley, and their derivatives. (1) A strict GFD is an effective treatment for most people with CD. The GFD also helps to avoid future complications in the vast majority of patients with celiac disease. (2)

2. When can I stop the gluten-free diet?

The gluten-free diet is the treatment for celiac disease and celiac disease is a LIFE-LONG condition. Even after symptoms improve, you should continue on a GFD. Remember that even small amounts of gluten from mistakes in the diet, overlooked sources of gluten, or cross-contact can prevent the body from healing completely.

3. What are the benefits of being on a gluten-free diet?

Celiac disease is an inflammatory disease that causes damage to the lining of the small intestine. These changes lead to a variety of symptoms and malabsorption of different micronutrients such as iron, folic acid, vitamin B12, vitamin D, and zinc.

Eliminating gluten-containing foods allows the villi in the small intestine to heal and absorb nutrients properly. This also leads to the resolution of symptoms, such as diarrhea, constipation, abdominal pain, headaches, foggy brain, and joint pain. Levels of antibodies against gluten (tTg, EMA, DGP) in the blood should also return to normal. Visit "Blood Tests" on CeliacNow.org for more information on these antibodies.

Most people start to benefit from a GFD within a few weeks with improved symptoms. However, histological recovery (recovery of the tissues as seen under a microscope) might take 1-2 years or longer. (4)

4. How do I figure out which foods contain gluten??

- An experienced dietitian can guide you in choosing gluten-free foods, both from grocery stores and from restaurants, so that you can learn to read labels, avoid cross-contact, maintain your usual lifestyle, and eat a well-balanced GFD. (4)
- Learn what ingredients to look for on labels and recognize often overlooked sources of gluten. Keeping a food diary can be helpful to determine possible sources of gluten. Remember that following a GFD is a learning process and that your dietitian is there to help you. Visit "What to Expect at Your Nutrition Visit," "Simple Start to the Gluten-Free Diet," "Healthy Eating on the Gluten-Free Diet" and the entire section on "Label Reading" on CeliacNow.org

5. Is any other treatment required in addition to the GFD?

Due to inflammatory changes in your small intestine, some micronutrient deficiencies (iron, folic acid, vitamin D, vitamin B12, and zinc, etc.) might arise. (2-4) Testing for these levels allows your doctor to correct them with supplements or occasionally injections. Your gastroenterologist or dietitian will determine the dose and length of time on supplementation. Do not hesitate to contact them at any time with questions.

It is recommended to check celiac antibodies in the blood (tTG, DGP, EMA) each year. The level of these antibodies should decrease with a GFD. Checking one of these antibodies annually shows doctors that the GFD is working and that you are not accidently consuming gluten. While minor gluten ingestion will not show up in these tests, they do offer a good picture of general gluten exposure.

Additionally, you may get a bone density scan within the first year to make sure your bones are strong. Based on your response to the gluten-free diet and any symptoms, your gastroenterologist will also determine whether a follow-up endoscopy with biopsy is recommended.

6. Is there any other treatment available to avoid GFD?

Currently, there are no other treatments to <u>replace</u> the GFD. However, some therapies are under development:

- Latiglutenase (ALV-003): Latiglutenase is an enzymatic treatment (similar to the enzyme, lactase, for lactose intolerance) capable of digesting gluten. Studies have shown controversial results regarding symptomatic and histological improvement. (5,6) For this reason, further studies are required to determine its potential role in CD treatment.
- **Larazotide**: Larazotide is a novel therapy developed for CD patients (in addition to the GFD). A study showed that Larazotide reduced symptoms more effectively in patients on Larazotide and a GFD versus patients only following a GFD. (7) However, further clinical trials are needed to determine its potential role in CD.
- **TIMP-GLIA:** Toleragenic Immune Modifying nanoparticles (TIMP-GLIA) is a nanoparticle containing fragments of gluten protein that has been designed to help the immune system to tolerate gluten rather than reacting to it and causing inflammation. (8) However, clinical trials have just begun on humans in order to know its efficacy and safety. (9)
- Nexvax2: Nexvax2 is a vaccine for patients with CD who carry the gene HLA-DQ2.5. Similar to allergy shots, it seeks to use multiple injections to reprogram the immune system so that gluten does not cause an inflammatory response. If proven effective, an individual with CD would be able to tolerate gluten, resuming an unrestricted diet. However, the initial trial has only demonstrated its safety in humans. Currently, efficacy trials to determine the true role of Nexvax2 in celiac disease are still ongoing.

It is important to highlight that the new therapy studies have only been tested in patients on a strict GFD. Despite all effort to create new treatments for CD, the GFD remains the only therapy.

7. What should I do if my symptoms do not improve on a GFD?

If your symptoms do not improve, then you should consult your dietitian skilled in CD and a GFD to help you to identify possible sources of gluten or other foods you may not be tolerating well (such as lactose). If no obvious sources of gluten or other food triggers are found, your gastroenterologist will evaluate you for other conditions Non-responsive CD and refractory CD are two conditions that require further testing and assessment. Visit "Medical Management" to read more about these conditions.

8. Recommendations

- The GFD is the current treatment of CD which allows the villi in the small intestine to heal. Remember that this is a life-long treatment.
- Request blood tests to check your vitamin and mineral levels. People with CD are more
 likely to have low iron and vitamin levels since their damaged villi make it difficult to
 absorb nutrients. Testing for these levels allows your doctor to correct them with
 supplements or occasionally injections. Your gastroenterologist and/or dietitian will
 determine the dose and length of time needed on supplementation.
- We strongly recommend visiting an experienced dietitian who will help you to adapt to GFD, avoid often overlooked sources of gluten, and maintain a well-balanced diet. Visit "Nutritional Consults" under Nutrition and the Gluten-Free Diet on CeliacNow.org.
- Remember to schedule regular visits to discuss your celiac disease at least one year with your gastroenterologist or a physician who is knowledgeable about CD. The doctor will make sure you are getting the proper tests to ensure optimal health.
- Visit "What to Expect at your Gastroenterologist's Visit" on CeliacNow.org.
- If you have any symptom (persistent or new onset), do not hesitate to contact your gastroenterologist. You may need further assessment and/or treatment.

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