

**A**lthough celiac disease is common, only about 150,000 know they have it. This means that 95% are in need of a proper diagnosis.

## WHAT IS CELIAC DISEASE?

Celiac disease is an autoimmune disease that damages the villi of the small intestine and interferes with the proper absorption of nutrients from food. It is triggered by the consumption of gluten, the protein found in wheat, barley, and rye, and is treatable with a life-long gluten-free diet. Left undiagnosed or untreated, celiac can lead to further complications such as osteoporosis, thyroid disease and cancer.

## DO I HAVE CELIAC?

While symptoms typical of the disease include diarrhea, constipation, bloating, and recurrent abdominal pain, celiac disease is increasingly prevalent in women experiencing:

- Stillbirth
- Miscarriage
- Chronic fatigue
- Early menopause
- Caesarean delivery
- Unexplained infertility
- Iron deficiency anemia
- Menstrual irregularities
- Absence of menstruation
- Reduced duration of breastfeeding
- Osteoporosis
- Osteopenia

For many women, unexplained infertility is the only sign of undiagnosed celiac disease. Studies indicate that celiac disease may occur in as many as 4% to 8% of women with unexplained infertility.

That's the bad news. The good news is that a proper diagnosis is easy and treatment can restore your health. Doctors have observed women successfully conceive after a year or more upon receiving a diagnosis and maintaining a strict gluten-free diet.



## WHAT IS THE NFCA?

The National Foundation for Celiac Awareness (NFCA) is a nonprofit organization that raises awareness of celiac disease among the general public and the healthcare community; facilitates research to better understand the causes, mechanisms and treatment of celiac disease; and improves the quality of life for individuals maintaining a gluten-free diet. The NFCA is a leading resource for celiac information and the NFCA website offers free, comprehensive information and support materials to patients with celiac disease, their families and healthcare professionals.

P.O. Box 544  
Ambler, PA 19002-0544  
Phone: 215.325.1306  
Fax: 215.643.1707

[info@CeliacCentral.org](mailto:info@CeliacCentral.org)  
[www.DidHaveCeliac.org](http://www.DidHaveCeliac.org)

**Restoring Health. Reclaiming Lives.**

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**Beth Israel Deaconess  
Medical Center**

A teaching hospital of  
Harvard Medical School

# CELIAC DISEASE & WOMEN'S HEALTH

## A GUIDE TO UNDERSTANDING

Celiac disease affects 3 million Americans and is one of the most commonly occurring lifelong genetically determined diseases.

Like other autoimmune diseases, celiac occurs in more women than men.



In fact, women are diagnosed with celiac disease two to three times more often than men.

**NEVER HEARD OF CELIAC?  
WE'RE NOT SURPRISED.**

## TALK TO YOUR DOCTOR

Celiac disease can affect more than your reproductive health. But suffering from any of these symptoms – especially over time – may indicate that you should ask your doctor for a celiac blood test.

Blood tests are the first step in a diagnosis of celiac disease. A doctor will order one or more of a series of blood tests to measure your body's response to gluten. Currently, recommended tests include:

- Total IgA
- IgA-tTG
- IgA-EMA
- If IgA is deficient, it is recommended that the IgG/IgA-DGP also be ordered. At the discretion of the doctor, IgG-AGA can also be ordered.

**It is important to continue eating a normal, gluten-containing diet before being tested for celiac. If the blood tests indicate celiac, a doctor may suggest a biopsy of the lining of the small intestine to confirm the diagnosis.**

If your doctor diagnoses you with celiac disease, please urge your family members to get tested. Celiac disease is a genetic disorder. First and second degree relatives of those with celiac are at an increased risk for developing this autoimmune disease. A more complete list of symptoms and associated conditions can be found at:

[www.DolHaveCeliac.org](http://www.DolHaveCeliac.org)

## MAXIMIZING NUTRITION FOR PREGNANCY

By Melinda Dennis, MS, RD, LDN

### OVERVIEW OF THE GLUTEN-FREE DIET

Following a strict gluten-free diet is the most important key to optimizing health with celiac disease.

Since the gluten-free diet is often found to be low in calcium, iron, fiber, zinc, B vitamins, vitamin D, and magnesium, it is very important to replace these nutrients through a healthy, balanced diet and appropriate gluten-free multivitamin/mineral supplementation. And, because lactose intolerance is common in celiac disease, adequate calcium and vitamin D intake from food and supplements is important. Other vitamins or minerals may also be recommended such as iron and B vitamins. Whole gluten-free grains, such as brown rice, quinoa, and amaranth, are excellent sources of fiber, vitamins and minerals, and play a key role in a healthy gluten-free diet.

Good nutritional status and celiac disease remission should be reached *before* you become pregnant to maximize your health and your child's health. Since nutritional deficiencies can impact reproductive function, specifically zinc, selenium, iron and folate, all labs should be normal or considered close enough to goal by your physician. Begin your gluten-free prenatal vitamin/mineral supplement as soon as you begin to consider pregnancy.



### KEY COMPONENTS FOR A HEALTHY PREGNANCY

- Safe food handling
- Appropriate weight gain: Estimated caloric needs during pregnancy vary by individual
- Appropriate physical activity
- Consumption of a variety of foods in accordance with the Dietary Guidelines for Americans 2010
- Appropriate and timely vitamin and mineral supplementation
- Avoidance of alcohol, tobacco and other harmful substances



### NUTRITION FOR PRENATAL & PREGNANT WOMEN: THE BASICS

Assuming a good health status and strong adherence to the gluten-free diet, here are some specific nutrient guidelines to keep in mind before and while pregnant.

**Iron:** Increase intake of iron-rich foods or iron-fortified foods, along with vitamin C rich foods to increase absorption.

**Folic acid:** Aim for a daily intake of 600mcg of synthetic folic acid from fortified foods or supplements, as well as folate from food such as dark, leafy greens, dried beans, whole gluten-free grains, and enriched or fortified gluten-free commercial products.

**Calcium and vitamin D:** Many healthcare providers recommend 1,200mg of calcium and 1,000IU of vitamin D per day for adults with celiac disease.

Your healthcare provider will also discuss adequate **protein, omega-3 fatty acids, fiber, fluid, vitamin, mineral, and other supplement needs** based on your lab testing, diet and past medical history. For optimal care, seek prenatal and pregnancy counseling from physicians and registered dietitians specializing in celiac disease.

### RECOMMENDED LAB TESTING FOR NEWLY DIAGNOSED CELIAC DISEASE

- Complete blood count (CBC)
- 25 OHD (Vitamin D)
- Folate
- B12
- IgA-tTG
- TSH
- Iron studies: Ferritin is preferred
- Bone mineral density test (BMD): Usually done 12 months after starting the gluten-free diet. Please talk to your doctor about the timing for BMD test and pregnancy.

*Other labs based on need: Fat soluble vitamins (A, E and K), zinc, selenium, & magnesium.*