



GLUTEN  
INTOLERANCE  
GROUP™



# Pregnancy and Celiac Disease

*Updated July 2021*

Pregnancy and celiac disease both call for extra considerations when it comes to nutrition. What if you fall into both categories? Do some of the needs overlap, and are there special nutritional issues that arise for pregnant women who have celiac disease?

Significant evidence supports the role of a healthy diet in optimizing pregnancy outcomes. The nutrients found in a healthy, varied diet are needed to maintain mother's health and to support normal development of the fetus. Needs for iron and folic acid are greater in pregnant women, and supplementation is generally recommended. A healthy, varied diet should provide other needed nutrients, but a prenatal vitamin supplement can help ensure adequate intake, in addition to providing extra needed iron and folic acid. Maintenance of a healthy weight and appropriate weight gain during pregnancy are also important diet-related aspects of pregnancy which are associated with better outcomes.

When assessing your own dietary needs and weight gain during pregnancy, it is important to discuss your unique situation with your personal healthcare team.

## **Some of the key nutrients needed in pregnancy**

### **Iron**

Used in creation of hemoglobin in red blood cells, which carries oxygen to cells and organs throughout the body. Extra iron is needed to supply oxygen to the fetus. Good sources: lean red meats, poultry, beans & lentils, fortified grain products.

### **Folic Acid**

Needed to help prevent neural tube defects. Since its role is important during the very first part of pregnancy, before many women know they are pregnant, it is recommended that all women of childbearing age who may become pregnant consume sufficient folic acid. In 1998 the FDA required that folic acid be added to enriched grain products to help prevent neural tube defects. Good sources: Brussels sprouts, broccoli, beans & lentils, spinach and other greens. ["Folic acid" is named after the Latin word for "leaf" (just like "foliage") due to the fact that leafy vegetables are a good source.]

### **Calcium**

Necessary for building bones and teeth in the fetus. Good sources: milk and other dairy products (choose low fat versions more often), plant-based alternative milks that are calcium fortified. Other sources: calcium set tofu, beans, almonds.

### **Omega-3 fatty acids**

Play important role in brain development of the fetus. Best sources are fish and shellfish. Other sources: walnuts, canola oil, ground flaxseed, edamame.

*\*To limit exposure to mercury, which has been linked to some birth defects and which has been found in some fish, avoid: marlin, shark, swordfish, king mackerel, orange roughy, bigeye tuna, Tilefish from the Gulf of Mexico. If you eat fish from local streams or lakes, check local advisories on these bodies of water. It is recommended that pregnant women consume 8-12 ounces of a variety of seafood per week, from lower mercury choices. For more information on which fish to choose, go to: <https://www.fda.gov/Food/ResourcesForYou/Consumers/ucm393070.htm>*

### **Other dietary considerations**

Alcohol should not be consumed during pregnancy. This is because, especially during early pregnancy, alcohol intake may result in neurological or behavioral problems in the offspring. Research on caffeine is not entirely conclusive; the general recommendation is to keep intake below 200 mg per day (the approximate amount in about 12 ounces of coffee). As stated above, appropriate weight gain is important. Obesity and excessive weight gain can increase risk of gestational diabetes, other health issues and C-section. Not enough weight gain is associated with having a baby who is too small, which can increase risk in the infant of illness and possibly of developmental delays.

Now that we've seen what some of the main nutritional considerations are during pregnancy, let's look at how these needs may be impacted in a mother-to-be who has celiac disease.

### **Celiac Disease and Pregnancy**

- **Iron.** In women recently diagnosed with celiac disease, nutritional deficiencies which occurred due to intestinal damage may not yet have had a chance to reverse. Iron deficiency anemia is one of the most common symptoms of celiac disease in adults. Discuss assessment of iron status with your healthcare team, before becoming pregnant.
- **Folic Acid.** Gluten-free grain based products are less likely to be enriched or fortified, and so less likely to provide significant amounts of folic acid. Intestinal damage may also cause deficiency of this nutrient. Discuss supplementation before becoming pregnant.
- **Calcium.** Some people with celiac disease – especially in early stages after diagnosis – may lose ability to digest lactose, and therefore may need to limit dairy intake. Ensure adequate intake from other food sources, and/or from supplements.
- **Other vitamins and minerals.** Intestinal damage can cause deficiencies of various vitamins and minerals, including zinc, vitamin D, vitamin B12 and other B vitamins. Vitamins and minerals play numerous important roles in fetal development. Discuss with your healthcare team assessment of potential deficiency status, potential supplementation, and maintain a healthy, varied diet.

What about a mother to be who has celiac disease but has not been diagnosed? Each of the nutrient issues discussed above may exist to a greater degree and could increase risk of pregnancy problems. Undiagnosed/untreated mothers are at higher risk for miscarriage, infertility, intrauterine growth retardation and low birth weight babies. If you suspect you may have symptoms of celiac disease, or have had concerns about fertility or miscarriages, talk to your doctor about celiac disease testing.

### **After baby is born to a parent with celiac disease**

Because celiac disease has a genetic component, there is a greater chance that a child of a parent with celiac disease may also develop the condition. Estimates are that celiac disease will develop in approximately 5-15% of children (and other first degree relatives) of those who have been diagnosed. Unless your infant has symptoms, screening is generally not recommended until a child is 3 years old. Find more information here: <https://gluten.org/2019/10/18/ceeliac-disease-testing-in-children/>. You may also want to consider having genetic testing done to see if your child carries the genes necessary for the development of celiac disease. A positive genetic test means that celiac disease could possibly develop in the future - keep in mind that about 33% of the general population carry these genes, but only 1% develop celiac disease. A positive test means you will want to watch for symptoms and have testing done when/if necessary. A negative test is more conclusive:

it tells you that your child will not develop celiac disease, and that no additional monitoring or testing is necessary.

- Does how you feed your infant influence risk of developing celiac disease? The University of Chicago Celiac Center issued new guidelines for infants who have a first degree relative with celiac disease and who have tested positive for genetic predisposition to CD (note that these guidelines apply only to infants in this category):
  - » *Gluten in large amounts in the first two years of life favors the onset of celiac disease. Gluten-containing foods should be given, beginning at the usual age of 4-6 months, but during the first 2 years should be less than 5 grams per day on the average, (i.e. less than about 1 ounce of pasta or 1 slice of bread). The best preventative strategy to reduce incidence of celiac disease in this vulnerable population is healthy eating in accordance with the Mediterranean Diet, again during the crucial first 2 years of life.*

(Learn about the Mediterranean diet here: <https://gluten.org/the-mediterranean-diet/>)

- Breastfeeding does not seem to provide protective effects regarding development of celiac disease, but it does have many other benefits.

## References

- Guandalini, S (2019). New Infant? New Guidelines: Feeding Infants at Risk for Celiac Disease. *Impact* newsletter, University of Chicago Medicine Celiac Disease Center. [http://www.cureceliacdisease.org/wp-content/uploads/CdC\\_Newsletter\\_IssueOne\\_032019\\_v6.pdf](http://www.cureceliacdisease.org/wp-content/uploads/CdC_Newsletter_IssueOne_032019_v6.pdf)
- Moleski S et al. (2015). Increased rates of pregnancy complications in women with celiac disease. *Annals of Gastroenterology*. 28(2): 236–240.
- Panth N, Gavarkovs A, Tamez M, Mattei U (2018). The Influence of Diet on Fertility and the Implications for Public Health Nutrition in the United States. *Frontiers in Public Health*. 6:211. doi: 10.3389/fpubh.2018.00211
- Saccone G et al. (2016) Celiac Disease and Obstetric Complications: A Systematic Review and Metaanalysis. *Am J Obstet Gynecol*. ;214(2):225-234. doi: 10.1016/j.ajog.2015.09.080.
- Silano M, Agostoni C, Sanz Y, et al. (2016) Infant feeding and risk of developing celiac disease: a systematic review. *BMJ Open*;6:e009163. doi: 10.1136/bmjopen-2015-009163
- The American College of Obstetricians and Gynecologists (2018). Frequently Asked Questions, Pregnancy; Nutrition During Pregnancy. <https://www.acog.org/womens-health/faqs/nutrition-during-pregnancy>
- U.S. Food and Drug Administration (2018). Eating Fish: What Pregnant Women and Parents Should Know. <https://www.fda.gov/Food/ResourcesForYou/Consumers/ucm393070.htm>

This educational bulletin has been produced by the Gluten Intolerance Group of North America, a registered 501(c)3 organization. Learn more about GIG at [www.gluten.org](http://www.gluten.org).

GIG is on a mission to make life easier for everyone living gluten-free.

This information is for educational purposes only. Consult your healthcare team when considering this information. This document may be reproduced for educational use. To request permission to reproduce this bulletin for any other purpose, contact:

Gluten Intolerance Group (GIG)  
31214 – 124th Ave. S.E.  
Auburn, WA 98092-3667  
Phone: 253-833-6655  
Fax: 253-833-6675  
[customerservice@gluten.org](mailto:customerservice@gluten.org)

Advances in gluten-related disorders are fast-paced. If this document is more than 2 years old, please visit [gluten.org](http://gluten.org) for updated documents.