



Vegetarian Nutrition

a dietetic practice group of the
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RDN Resources for Consumers:

Vegetarian/Vegan Gluten-Free Diet

Celiac Disease is an autoimmune disorder in which the ingestion of gluten leads to damage in the small intestines.

About 1-2% of the population has Celiac Disease. It is estimated that only 10-20% of the people are diagnosed, and there are many who suffer from misdiagnosis and/or have delayed diagnosis. When people with celiac disease eat foods or use products containing gluten, their immune system responds by damaging the lining of the small intestine. When the small intestine becomes damaged, nutrients cannot be absorbed properly into the body. (1)

Celiac disease is hereditary, meaning that it runs in families. People with a first-degree relative with celiac disease (parent, child, sibling) have a 1 in 10 risk of developing celiac disease (1).

Celiac Disease can be triggered at any age. Left untreated, it can lead to many health problems such as anemia, osteoporosis, infertility and miscarriage, neurological conditions like epilepsy and migraines, short stature, intestinal cancers; and may cause other autoimmune disorders such as Type 1 diabetes or thyroid disease (1).

Currently the only treatment for celiac disease is a strict adherence to a gluten-free diet. Gluten is a protein that is found in wheat, rye, and barley. Gluten may also be present in other household items such as medicine, vitamins, and cosmetics (1). Celiac disease is different from a wheat allergy. (2) A gluten-free diet is also recommended for people with wheat allergy, gluten sensitivity, and other autoimmune conditions such as Hashimoto's and Rheumatoid Arthritis. (3) Gluten-free diets should not be used for weight loss or as a low carb diet. Gluten and grains should not be avoided if you don't have any of the above listed conditions (4).

Gluten-Free Diet

Importantly, wheat free may not mean gluten free. Wheat-free foods still may contain rye or barley. It's best to avoid allwheat, rye, and barley. Malt and malt flavorings are made from barley, and are not gluten free. Gluten may also be present in other household items such as medicine, vitamins, toothpaste, lipstick and chap sticks. A gluten-free diet is one that avoids all products made from or containing wheat, rye, and barley. It is best to focus on eating foods that are naturally gluten-free rather than depending on packaged gluten-free products. It is important to be mindful about cross contamination and hidden sources of gluten.

Nutrients for consideration

Calcium and Vitamin D

Malabsorption of vitamin D and calcium are common in advanced and untreated celiac disease, thus leading to bone disease (osteopenia, osteoporosis, osteomalacia) (5). Non-dairy sources of calcium include: leafy greens (such as collards, broccoli, bok choy), calcium-set tofu, nuts, seeds, fortified non-dairy milks, dried figs, blackstrap molasses, chickpeas and other white beans, tahini, and the gluten-free grains Teff and amaranth. (6)

For more information on calcium see RD resources on Calcium: [vegetariannutrition.net/docs/Calcium-Vegetarian-Nutrition.pdf](https://www.eatright.org/docs/default-source/vegetarian-nutrition/docs/Calcium-Vegetarian-Nutrition.pdf)

Iron

Iron deficiency due to malabsorption is the most common symptom of recently diagnosed or untreated celiac disease. Since most gluten-free products are not iron-fortified, vegetarians and vegans with celiac disease will need to choose other iron-rich plant foods to meet their needs.

For a list of foods rich in iron see RD resources on Iron: [vegetariannutrition.net/docs/Iron-Vegetarian-Nutrition.pdf](https://www.eatright.org/docs/default-source/vegetarian-nutrition/docs/Iron-Vegetarian-Nutrition.pdf)

Zinc

Low zinc levels are common in those with newly diagnosed or untreated celiac disease, due to malabsorption and persistent diarrhea. Gluten-free sources of zinc include cooked dried beans and lentils, sea vegetables, gluten-free soy foods, plain nuts and seeds, and whole gluten-free grains.

For a list of foods rich in zinc see RD resources on Zinc: vegetriannutrition.net/docs/Zinc-Vegetarian-Nutrition.pdf

Vitamin B12

Vitamin B12 is important for the nervous system and forming red blood cells. Vegetarians can find B12 in dairy products fortified non-dairy beverages labeled gluten free, eggs, and fortified gluten-free products. Vegan diets lack natural food sources of B12. Supplemental B12 may be needed due to malabsorption in celiac disease.

For more information on Vitamin B 12 in vegetarian diets: vegetriannutrition.net/docs/B12-Vegetarian-Nutrition.pdf

Fiber and Protein

Fiber intake is often low in the gluten-free diet. Most gluten-free packaged foods are made with simple starches such as tapioca and potato starch, and often lack in fiber. Increase fiber by including a variety of foods naturally high in fiber such as fruits, vegetables, legumes, plain nuts and seeds, and whole gluten-free grains in the daily diet. Protein needs can be met by eating a wide variety of plant foods over the course of each day.

Where is Gluten Hidden?

Gluten is commonly found in processed vegetarian and vegan foods such as “meat” and soy products. Be sure to read labels carefully, and buy products labeled gluten-free. Be aware of cross contamination.

- **Tofu:** seasoned, flavored, and marinated tofu may contain wheat or regular soy sauce
- **Seitan:** all forms of seitan are made from wheat
- **Burgers and other meat substitutes** may contain wheat
- **Tempeh:** multigrain or seasoned tempeh may contain wheat
- **Soy, Rice, Almond Milk:** some brands may contain malt or barley extracts
- **Miso:** some types of miso may be made from wheat

Naturally Gluten-free Vegetarian/Vegan Foods

- Fruits (fresh or frozen)
- Vegetables (fresh and frozen vegetables-plain- without any sauces added)
- Beans, lentils, and legumes (dry and canned -plain; not seasoned); bean, lentil and chick pea flour
- Nuts and seeds; natural nut butters and peanut butter
- Gluten-free whole grains such as Amaranth, Buckwheat, Millet, Quinoa, Rice (white, brown, wild), Sorghum, Teff
- Starchy vegetables and flours such as arrowroot, potato, sweet potato, yam, cassava, lotus, sago & tapioca
- Soy beans, edamame, tofu, plain soy milk
- Plain dairy or non-dairy milk, yogurt, and cheese
- Eggs

Oats

- Oats are often grown or processed with other cereals leading to cross-contamination with wheat, barley or rye.
- Buy oats that are labeled gluten-free. These are grown without cross-contamination.
- Although oats appear to be safe in most people with celiac disease, there are some people who may not tolerate oats.

Discuss your specific diet with your doctor and a registered dietitian nutritionist (RDN). Your doctor will likely check your levels of iron, vitamin D, calcium, B12, folate, and zinc. An RDN can help you develop a healthy gluten-free vegetarian/vegan eating plan that meets your needs.

To find an RDN in your area, visit

vegetriannutrition.net/find-a-registered-dietitian/

References

References and additional data tables for this resource can be found at on our website at:

vndpg.org/rd-resources/gluten-free-diets/

RD Resources are a project of the Vegetarian Nutrition Dietetic Practice Group. More topics available at www.VegetarianNutrition.net. Professional resources also available for members at www.VNDPG.org. © 2019 by VN DPG.

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