Gluten - -

What is gluten?

Gluten is a protein found in wheat, barley, rye, and triticale (a hybrid of wheat and rye). Common foods that contain gluten include pastas, breads, cereals and a variety of other grain-based products. If you have a sensitivity to gluten, it may be considered a gluten sensitivity, a gluten intolerance, or even Celiac Disease. Celiac Disease is an autoimmune disease that causes your body to attack the intestines when gluten is present. If you have this condition, having a gluten free diet can help heal your intestine and help prevent complications such as bone disease if the condition goes untreated.

According to the Celiac Disease Foundation, CELIAC DISEASE, is estimated to affect 1 in 100 people worldwide (celiac.org). It is characterized by a genetically based sensitivity to certain sequences of amino acids found in the prolamin fraction of wheat, barley, and rye. When these grains are consumed by persons with celiac disease, they trigger an immune response that results in damage to the mucosa of the small intestine. This damage reduces the absorptive surface of the small intestine, resulting in the malabsorption of macronutrients and micronutrients.

Who should eat gluten free?

- People diagnosed with Celiac Disease
- People with a sensitivity/ intolerance to gluten

What foods should I avoid?

Wheat (all types including einkorn, kamut, spelt, and emmer) Barley, Triticale, Rye, Malt, Oats (unless they are gluten free)

Processed foods that may contain wheat, barley, or rye

Check the ingredient list of all processed foods for sources of wheat, barley, and rye.

Following are some examples of processed foods that may contain gluten:

- Bouillon cubes
- Brown rice syrup
- Candy
- · Cold cuts, hot dogs, salami, sausage
- Communion wafers
- French fries
- Gravy
- Imitation fish

- Matzo
- Rice mixes
- Sauces
- Seasoned tortilla chips or potato chips
- Seitan
- Self-basting turkey
- Soups
- Soy sauce
- Vegetables in sauce

What foods can I include?

Amaranth Arrowroot Buckwheat Cassava Corn Flax Indian Rice Grass Job's Tears Legumes (dried beans, peas, lentils) Millet

Finger Millet Nuts Potatoes Quinoa Rice Sago Seeds Sorghum Soy Tapioca Teff Wild Rice Yucca



Nutritional considerations

Many specially formulated, gluten-free cereal foods (ie. bread products, pasta, breakfast cereal) are made using refined flour or starch. Unlike refined wheat-based products, most refined gluten-free products are not enriched with the following nutrients:

- Thiamin
- Riboflavin
- Niacin
- Folate
- Iron







Nutritional considerations Not consuming adequate servings of whole-grain or enriched gluten-free foods may also result in inadequate intakes of these nutrients (Thompson, 2005). Here are some recommendations to ensure adequate intakes of thiamin, riboflavin, niacin, folate, iron and fiber:

- Consume the recommended number of servings from the grain food group each day, depending on energy
 requirements (see MyPlate.gov for help in determining your individual energy requirements and recommended
 number of servings of grain foods).
- Choose whole grain, gluten-free products (ie. teff, millet, quinoa, buckwheat) whenever possible. According to the
 Dietary Guidelines for Americans, at least half of an individual's grain food servings should be whole grain (Dietary
 Guidelines for Americans 2020).
- Increase intake of gluten-free products made from alternative plant foods (ie. amaranth, buckwheat, quinoa).
 These plant foods are good sources of iron and fiber as well as some B-vitamins.
- Increase intake of noncereal sources of thiamin, riboflavin, niacin, folate, iron, and fiber.
- Consider taking a gluten-free multivitamin and mineral supplement if recommended by your doctor and dietitian.

Labeling regulations

According to the FDA, a product can be labeled "gluten-free" if it meets the following criteria:

1. Gluten content:

The product contains less than 20 parts per million (ppm) of gluten and does not include:

- Any wheat, rye, barley, or crossbred grains
- Ingredients derived from these grains that haven't had gluten removed
- Ingredients processed to remove gluten if the final food still contains 20 ppm or more
- 2. Naturally gluten-free foods:

Foods that inherently contain no gluten (such as fruits, vegetables, eggs, or bottled water) may also carry the "gluten-free" label.

Even with this label, always check whether the product was made in a gluten-free facility, as cross-contamination can still occur. Contact the manufacturer if you're unsure.

Prevent cross contamination

- Store gluten-free foods on upper shelves to avoid contamination.
- Label gluten-free items clearly.
- Wash all cookware and utensils thoroughly.
- Use a dedicated gluten-free toaster and cutting boards.
- Keep separate condiment jars or use squeezable containers to prevent cross-contact.

What you should know about oats

Use caution with oats. Though naturally gluten-free, some people with celiac disease still react to pure oats due to a similar protein or cross-contamination during processing. Talk with your healthcare provider before adding oats to your diet. Choose only oats labeled "pure, uncontaminated," or "certified gluten-free." Up to 50g of dry gluten-free oats per day is generally considered safe.

FAQs

Q: Are wheat-free products also gluten free?

A: Not necessarily. Wheat-free products also may contain barley or rye.

Q: Do all individuals need to eat a gluten free diet?

A: Not all individuals need to stick to a strict gluten free diet. Individuals who have celiac disease are strongly advised to follow a gluten free diet, specifically avoiding cross contamination with wheat, barley and rye. Individuals who are gluten sensitive or gluten intolerant, may be able to consume small amounts. However, this can vary person to person.

Q: Can persons with celiac disease eat buckwheat?

A: Yes. Despite its name, buckwheat is not closely related to wheat.

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