

Healthy Eating on the Gluten-Free Diet

The only treatment for celiac disease is strict adherence to a gluten-free diet (GFD). In addition to being gluten-free, it is important that you strive for an overall healthy, balanced diet. Below is a simple list of targets for you to track to ensure an optimal healthy diet. As always, please pay attention to and avoid hidden sources of gluten as well as cross contamination from gluten-containing grains.

- **Gluten-Free Grains:** There are various types of grains (and seeds that act like grains, like quinoa) allowed on the GFD, some higher in fiber than others. Some sources of healthy **high** fiber gluten-free whole grains include, but are not limited to, amaranth, buckwheat, millet, quinoa, brown rice, teff, sorghum, wild rice, oats, brown rice and whole corn.
- Consume at least half of your gluten-free grains each day from whole grain sources.¹
- Choose foods that list gluten-free whole grains or flours made from them as the first ingredient whenever possible.²
- Only purchase grains that are labeled gluten-free. We suggest choosing oats that are specially grown and processed to be gluten-free and are labeled gluten-free. Rice does not need to be labeled gluten-free but be sure to avoid rice pilafs or rice mixes unless labeled gluten-free. They often contain orzo (wheat) or other gluten containing grains.

Sample ingredient list of a bread product made with a gluten-free whole grain flour: [Brown rice flour, Filtered Water, Fruit Juice Concentrate (Pineapple, Peach, Pear), Tapioca Flour, Safflower Oil, Fresh Yeast, Vegetable Gum (Xanthan, Cellulose), Rice Bran, Sea Salt^{1 2}

- Choose products made from gluten-free grain foods that contain at least 2 grams of fiber per serving, and preferably more.
- Fiber is a very important part of a healthy diet and gut. Fiber needs vary based on gender, age and medical conditions. Speak to your dietitian to discuss your individual fiber needs.³ Read more: Fiber and the Gluten-Free Grains on www.celiacnow.org.

Fiber Recommendations (Daily Reference Intake)		
Age (years)	Gender	Fiber (grams per day)
14-50	Male	38
19-50	Female	25
>50	Male	30
>50	Female	21
All ages	Pregnant female	28
All ages	Lactating female	29

- If you are not used to eating a lot of fiber, slowly increase your intake of gluten free whole grains (in ½ cup cooked portions) and other fiber sources such as fruits, vegetables, plain nuts and seeds, dried beans and legumes. Also remember to drink plenty of water or other beverages as you add these foods.
- **B-Vitamins: Gluten-Free Whole Grains and Other Food Sources**
B vitamins are extremely important for brain, muscle, heart and digestive health as well as multiple other body processes. All of the B-vitamins (except B12) are found in varying amounts in the healthy gluten-free whole grains listed above. These gluten-free whole grains are the best way to get your important B vitamins.

Food Sources of B Vitamins:³

- *Thiamin (B1)* from lean pork, legumes (garbanzo beans, lentils, pinto beans, soy beans, and black beans, etc), flax seeds, and nuts
- *Riboflavin (B2)* from low-fat dairy products, legumes, nuts, green leafy vegetables (spinach, kale, collard or mustard greens, asparagus, and cabbage), and mushrooms;
- *Niacin (B3)* from lean pork, poultry, fish, legumes, and seeds (sunflower, pumpkin, or sesame seeds);
- *Folate (B9)* from legumes and green leafy vegetables
- Pyridoxine Hydrochloride (B6) from meat, fish, poultry, bananas, avocado, potatoes, sunflower seed, flax seeds, fortified gluten-free cereals
- *B12 (cobalamin)* from fish, shellfish, meat, poultry, eggs, dairy products, fortified gluten-free cereals, fortified gluten-free soy milk

Gluten-free multivitamin/mineral supplements also contain B vitamins in varying amounts.

- There are many refined gluten-free bread, pasta, baking mixes, and cereals in the gluten-free market. During processing, refined products have been stripped of B vitamins and minerals, as well as fiber, a key component of gut health. Examples of refined flours include white rice flour, rice starch, milled corn and cornstarch. Some, but not many, refined gluten-free products have been **enriched** with

thiamin, riboflavin, niacin, folate and iron and may also be **fortified** with B6, B12 and calcium. These nutrients should be listed in the ingredients list.

Sample ingredient list of a gluten-free enriched refined bread product:

[White rice flour, Water, Tapioca Starch, Whole Eggs, Sugar, Yeast, Sunflower and/or Canola Oil, Dextrose, Poly Dextrose, Pea Protein, Sodium Carboxy Methylcellulose, Salt, Vitamin Blend (Thiamin, Riboflavin, Niacin, Folic Acid, Iron)]²

- Keep in mind that when a product is processed and refined, other ingredients may also be added – starches (modified food starch), gums (guar gum), and sugars, etc. Some people may find them difficult to digest and they are not as healthy as whole grains.

- If you are not getting enough whole grains in your diet, first try to experiment with them, or take a cooking class. Always try to rely on whole gluten-free grains and grain products before you turn to the enriched refined gluten-free breads, pastas, and baking mixes and fortified breakfast cereals. Increase their fiber content by adding nuts, seeds, beans, legumes and fresh, dried, and canned fruits and vegetables.
 - Spread natural almond or peanut butter, ground flax seed and honey over a gluten-free bagel or slice of bread.
 - Add slivered almonds or other nuts and chia seeds into your breakfast cereal.
 - Add ground flax seed, chia seed, or dried fruit (avoid dates rolled in oat flour) into baking mixes.
 - Sauté a variety of vegetables in tomato sauce to pour over rice pasta.

- Eat a balanced gluten-free diet that is loaded with a VARIETY of fruits and vegetables, lean protein, healthy fats and a variety of whole gluten-free grains, nuts, seeds, dried beans and legumes with plenty of fluids.

- **SPECIAL REMINDERS:**
 - Only purchase gluten-free grains that are labeled gluten-free. Rice does not need to be labeled gluten-free but be sure to avoid rice pilafs or rice mixes unless labeled gluten-free.
 - If you have recently been diagnosed with celiac disease, add gluten-free grains slowly into your diet, as tolerated.
 - The decision to include gluten-free oats in your diet should be made with your doctor and dietitian. Choose only pure, uncontaminated gluten-free oats.
 - Always drink plenty of water when you include fiber in your diet.
 - Nuts, ground flax seed, chia seed and other seeds should be labeled gluten-free whenever possible

- If you are on a special diet, such as the Low FODMAP diet, or have other food sensitivities, you can make substitutions for some of these suggestions.

Read more: Healthy Eating on the Gluten-Free Diet on celiacnow.org.

- **Calcium & Vitamin D:** Damage to the small intestine from celiac disease may interfere with calcium and vitamin D absorption. Although individual needs vary based on age, bone health and blood levels, in general, an adult with celiac disease should consume about 1,200 mg of calcium from food and supplements COMBINED and ~1,000 IU (international units) of vitamin D per day.³ Primary sources of calcium include fat-free or low-fat milk, cheeses, and yogurt as well as the lactose-free versions of these products. Milk is typically fortified with vitamin D. There are also many non-dairy calcium rich foods, such as labeled gluten free almond, rice or soy milk, calcium fortified apple juice, calcium fortified breakfast cereals, labeled gluten-free chia seeds, blackstrap molasses, and black-eyed peas, just to name a few. Some people need calcium supplements and many people need vitamin D supplements to reach their goals. Speak to your doctor or dietitian.
- **Iron:** Iron is an important part of a healthy diet as it is needed to deliver oxygen to the tissues in your body. Having iron deficiency can lead to fatigue and decreased immunity. Individuals with celiac disease are at risk for iron deficiency, especially those who suffer from significant malabsorption, those on a vegetarian diet, and menstruating women. Heme iron, the iron source from red meat, fish and chicken, is the most readily absorbed. Iron sources from some vegetables and fruit, dried beans, and whole gluten-free grains are called nonheme iron and are less well-absorbed. Enriched gluten-free refined grain foods also contain non-heme iron. Adding vitamin-C rich foods, such as citrus fruit, strawberries, and green, red, and yellow bell peppers, to the same meal as your iron-rich foods will increase iron absorption. Gluten-free multivitamin/mineral supplements for premenopausal women contain approximately 18 mg of iron per tablet. Prenatal vitamins contain additional iron. Men and post-menopausal women do not need to take a multivitamin/mineral supplement that contains iron unless they are anemic. Additional iron supplementation should only be taken if recommended by your doctor.
- **Fruits & Vegetables:** Eating *at least* 4 and ½ cups (9 servings) of a variety of fruits and vegetables (depending on your calorie needs)¹ per day will ensure you are also getting enough vitamins A and C, folate, and potassium. It will also increase your fiber intake.
- **Fats:** Reduce saturated fat intake (fatty cuts of red meat, poultry with skin, and full-fat dairy such as whole milk, butter and cream)³ by choosing lean cuts of beef, pork, fish or poultry and fat-free or low-fat dairy products.¹ Consume 3-4 ounces of fatty fish (like herring, salmon, and tuna) about twice a week for

enough of the heart-healthy fats which contain omega 3 fatty acids (EPA and DHA). Obtain other omega 3 fatty acid – ALA – from plant sources such as ground flaxseed, chia seed, olive or flaxseed oil, and walnuts).³

- **Protein:** Lean protein sources such as poultry, fish, lean cuts of beef and pork, fat-free or low-fat dairy (milk, yogurt, cheese and cottage cheese) can be consumed for adequate protein intake. Protein can also be found in labeled gluten-free whole grains like quinoa, amaranth, buckwheat, and teff. Other gluten-free vegetarian sources of protein include tofu, eggs, lentils, dried beans, soybeans and soy milk (labeled gluten-free), and nuts and seeds. Your dietitian can help you determine your protein needs for the day.
- **Sweets and Salt:** Limit sweets (candies and baked goods), fruit juice, and sugar-sweetened beverages (e.g. soda, sweet energy drinks). Monitor salt/sodium intake by flavoring home-cooking with herbs and spices which do not contain salt or choosing low-sodium options when dining out. Americans should limit sodium intake to less than 2,300 mg per day – about 1 tsp.¹
- **Water:** Eating healthy also requires staying hydrated. Aim for 6-8 (8 ounce) glasses of pure, fresh water or other low sugar beverages, such as tea, milk or lactose free beverages (gluten-free rice milk, almond milk, etc.) per day.
- **Supplements:** Talk to your doctor or dietitian about a gluten-free multivitamin/mineral supplement appropriate for your age and gender to supplement your diet. You may need gluten-free calcium and vitamin D supplements, as well. Visit Nutritional Supplements on www.celiacnow.org.

As you can see, having a balanced diet doesn't have to be complicated – just follow these guidelines and you'll be on your way to improving your overall health!

References:

1. USDHHS. USDA. (2015). Dietary Guidelines for Americans, 2015. <http://health.gov/dietaryguidelines/2015/guidelines/executive-summary/#figure-es-1>. January 2016.
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3. Dennis, M, Leffler, D. *Real Life with Celiac Disease: Troubleshooting and Thriving Gluten-Free*. American Gastroenterological Association Press, Bethesda, MD, 2010.

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