

Wheat and Gluten-Free Diet

Some symptoms of allergy or intolerance can be divided into three main types:

- "Classical" allergy: asthma, hay fever, eczema.
- Conditions associated with tissue damage: colitis, contact dermatitis, sinusitis, rheumatoid arthritis, miscellaneous rashes, nephritis, mouth ulcers, iritic.
- Symptoms associated with altered function: fatigue, depression, abdominal distension, headache, irritability, blurred vision, muscle pain, frequency, migraine, dizziness, bed-wetting, food cravings, palpitations, nausea, fluid gain, diarrhea, vomiting, weight gain, constipation, abdominal pain, insomnia, chills, hallucinations, menstrual disturbances.
- Gluten is the component of these grains that is often allergenic. Gluten is portion of grain which makes them sticky, thus allowing them to be kneaded into breads. Yet, there are many other delicious grains used extensively throughout the world, which do not contain gluten. The non-glutenous grains are amaranth, quinoa millet, buckwheat, rice and corn. Teff, spelt and kamut contain very low levels of gluten and are often more well tolerated by sensitive individuals.

Forbidden List - Foods and Ingredients Not Safe for a Gluten-Free Diet

Abyssinian Hard (Wheat triticum durum)	Germ	Shot Wheat (Triticum aestivum)
Alcohol (Spirits - Specific Types)	Glutamate (Free) ⁴	Shoyu (soy sauce) ⁴
Barley Grass (can contain seeds)	Glutamic Acid ⁴	Small Spelt
Barley Hordeum vulgare	Glutamine (amino acid) ⁴	Soba Noodles ⁴
Barley Malt	Graham Flour	Sodium Caseinate (Contains MSG)
Beer	Granary Flour	Soy Sauce
Bleached Flour	Gravy Cubes ⁴	Spirits (Specific Types)
Blue Cheese (made with bread)	Groats (barley, wheat)	Spelt (Triticum spelta)
Bran	Ground Spices ⁴	Sprouted Wheat or Barley
Bread Flour	Gum Base	Stock Cubes ⁴
Brewer's Yeast	Hard Wheat	Strong Flour
Brown Flour	Kamut (Pasta wheat)	Suet in Packets
Bulgur (Bulgar Wheat/Nuts)	Malt	Tabbouleh
Bulgur Wheat	Malt Extract	Teriyaki Sauce
Bullion cubes	Malt Syrup	Textured Vegetable Protein - TVP
Calcium Caseinate (Contains MSG)	Malt Flavoring	Timopheevi Wheat (Triticum timopheevii)
Cereal Binding	Malt Vinegar	Triticale X triticosecale
Chilton	Miso ⁴	Udon (wheat noodles)
Club Wheat (Triticum aestivum subspecies compactum)	Macha Wheat (Triticum aestivum)	Vavilovi Wheat (Triticum aestivum)
Cocomalt,	Matzo Semolina	Vegetable Starch
Coloring	Mustard Powder ⁴	Vitamins ⁴
Common Wheat (Triticum aestivum)	Oriental Wheat (Triticum turanicum)	Wheat Triticum aestivum
Couscous	Ovaltine	Wheat Nuts
Dextrimaltose	Pasta	Wheat, Abyssinian Hard triticum durum
Durum wheat (Triticum durum)	Pearl Barley	Wheat, Bulgur
Edible Starch	Persian Wheat (Triticum carthlicum)	Wheat Durum Triticum
Einkorn (Triticum monococcum)	Postum	Wheat Triticum Monococcum
Emmer (Triticum dicoccon)	Poulard Wheat (Triticum turgidum)	Wheat Germ (oil)
Farina Graham	Polish Wheat (Triticum polonicum)	Wheat Grass (can contain seeds)
Filler	Rice Malt (contains barley or Koji)	Whiskey
Food Starch	Rye	Whole-Meal Flour
Fu (dried wheat gluten)	Seitan	Wild Einkorn (Triticum boeotictim)
	Semolina	Wild Emmer (Triticum dicocoides)
	Semolina Triticum	

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FOODS NOT ALLOWED:

- **Grain and Flours:**

The common list of forbidden grains is: wheat, barley, rye, oats, spelt and Kamut, triticale.

- **Wheat:** Flours--whole wheat, white, all-purpose, semolina, durum, all-purpose, unbleached, bleached; wheat gluten/bran/germ, graham flour. Unfortunately, there are variants out there that go by other names. Durum and semolina are names for certain kinds of wheat that have been bred for specific uses. Both spelt and Kamut are versions of wheat. Bulgur is wheat that's been specially processed. Triticale, a grain crossbred from wheat and rye, is definitely on the toxic list. Couscous contains gluten.
- **Barley and Malt:** Malt is made from sprouted barley and other grains at times. It can be made into barley malt extract as a sweetener. Ales, barley corn, barley malt, **beer**, malt liquor, caramel coloring, bourbon, whiskey, cocomalt gin, **any alcohol containing grain spirits, Soda (with caramel coloring)**, etc.
- **Rye:** Rye bread, rye crackers, multi-grain breads, gin, vodka, scotch, whiskey.

- **Breads/Pastries and Pasta**

Biscuits, breads, breaded or battered foods, cakes, cookies, crackers, crepes, croutons, cereals (including special K rice cereal, Grape nuts and some corn flakes), doughnuts, dumplings, graham, ice cream cones, oat bran, pasta, packaged rice dishes, pancakes, pie crusts, pretzels, wheat germ, waffles

- **Vegetables/Fruits**

Products containing thickening agents, which may utilize food starches and stabilizers with gluten.

- **Meats**

Prepared meats including luncheon meats, sausages, bologna, liverwurst, wieners and canned meats containing grain and starch fillers with gluten. Self-basting turkey and other fowl often contain fillers with gluten. Fresh ground meats containing "Oattrim" or "LeanMaker".

- **Dairy Products**

Cheese foods including spreads, soft cheeses, pudding, and dips often contain gluten. Some ice creams may contain gluten ice cream stabilizers.

- **Salad Dressings**

Salad dressings containing grain vinegars including distilled, white vinegar or if the type of vinegar is not stated. Some contain emulsifiers and stabilizers with gluten.

- **Drinks and Juices**

Some brands of flavored coffee, herbal tea, and instant cocoa mixes, including malted milk. Grain-derived drinks including Postum and Ovaltine.

- **Condiments and Additives**

Many soy sauces contain gluten and wheat. Soups or broths containing bouillon. Mayonnaise. Unspecified texturized or hydrolyzed vegetable protein, vegetable gum from oats and any other product containing an unspecified flour or cereal additive. Barley malt. Wheat starch. MSG. Caramel candy/coloring may contain gluten. Read labels on margarine to check for flour additives. Flavorings made with alcohol. Some spray coatings for "non-stick" uses have unspecified ingredients.

- **Alcohol/Vinegar**

If properly distilled these should not contain any harmful gluten peptides. Research indicates that the gluten peptide is too large to carry over in the distillation process. This leaves the resultant liquid gluten-free unless a gluten-containing additive is inserted after the distillation process. Alcohols and vinegars should be carefully investigated for additives before use. Malt vinegars are not distilled and therefore are not gluten-free. Whiskey, bourbon, gin and rye are definitely off the list, since they are made with rye and barley. Beer, too, must be avoided, since malt (usually from barley) is an ingredient. Even rice beers use malt.

- **Potential harmful ingredients** include unidentified starch, modified food starch, hydrolyzed vegetable protein-HVP, hydrolyzed plant protein-HPP, texturized vegetable protein-TVP, binders, fillers, excipients, extenders, malt & other natural flavorings, MSG

READ YOUR LABELS!!!!

- When using any commercial food product, the list of ingredients must be read carefully. Although ingredients are listed in order of decreasing content, any product containing even the smallest amount of gluten must be avoided. Any ingredient of unspecified grain origin should be assumed to contain gluten.

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FOODS ALLOWED

- **Grains, Breads, Cereals, Pastas**
 - Rice, corn, soy, arrowroot, potato, and tapioca-containing products. Breads may contain flour prepared from white or brown rice, potato, tapioca, arrowroot, pea, corn, buckwheat, or bean. Cereals include those from corn meal, millet, buckwheat, hominy, puffed rice, crisp rice, and cream of rice. Malt or malt flavoring derived specifically from corn. Pasta from rice, corn, and/or beans. Quinoa is fine. Splet and Amaranth are an option for some, but are in the wheat family, so this is trial and error.
 - Amaranth is a gluten-free grain that was used by the Aztec Indians hundreds of years ago. Like many of these gluten free grains, it has an unusual flavor at first. When cooked, it should resemble farina in texture: tiny, round and sand-like. It is in the wheat family so for some this is a potential allergen.
 - Quinoa is another gluten-free grain used by the Inca Indians. It is round and tan colored, but cooks into a light, translucent, fluffy grain. It, too, is richer in useable protein and lends itself well to pilaf and vegetable dishes.
 - Millet is yet another small, round, yellowish grain that has more protein than most. It is cultivated and used around the world. A common technique used with millet is to toast it by light cooking it in a dry pan till golden and then using it as a pilaf or breakfast grain.
 - Rice: Plain long grain or short grain brown rice can be transformed into "rice pudding" with the addition of vanilla, cinnamon, nuts and yogurt. This is the perfect thing to do with leftover rice, but avoid trying it with basmati rice: the popcorn flavor doesn't work well as a breakfast dish.
 - Non-Wheat Grains in Town
 - Breads: Healthy Food Stores such as Wild Oats, Whole Foods, Gentle Strength, Trader Joes, etc—either on their shelves or in the freezer section: Rye Bavarian Bread; Millet, spelt*, brown rice; Kamut bread and bagels.
 - Noodles: Spelt*, brown rice (the best, I think), Kamut (very good, too), corn (falls apart very easily), quinoa*.
 - Crackers: Rice cakes, Rye-Krisp or Rye-Vita, maybe others.
 - Corn tortillas: instead of wheat.
 - Cold Cereals: Perky's Nutty Rice, Amaranth* or Brown Rice or Kamut Flakes, Barbara Corn Flakes, Millet/Rice/Oat flakes, Etc.
 - Hot Cereal: Gluten free Oatmeal or Cream of Rice or Kamut hot cereal.
 - Misc: Popcorn, brown rice, millet, barley, quinoa, spelt, Kamut, amaranth, teff, oats, etc. are all okay.
 - Pancake/muffin mixes: 2Js and the HFS contains them.
 - Baking your own breads is an option. The following can be milled into flour: amaranth*, buckwheat* (or kasha), chickpeas (garbanzos), Job's tears (Hato Mugi, Juno's Tears, River Grain), lentils, millet*, peas, quinoa*, ragi, sorghum, soy, tapioca, teff*, and wild rice. Many of these flours are available in health food stores. Some (like rice flour) may be available in grocery stores. (The products marked with an "*" are listed as grains to avoid by some physicians and celiac societies so use as trial and error.) To improve the texture of gluten-free baked goods, most cooks use one or more of the following: xanthan gum, guar gum (though this sometimes has a laxative effect), methylcellulose, or a new product called Clear Gel. These can be obtained either through health food stores, specialty cook's stores, or some of the mail order sources listed below.
- **Vegetables/Fruits/Meats**: Fresh, frozen, dried, or canned products whose labels indicate they are free of thickening agents.
- **Dairy Products**: All aged hard cheeses. Pasteurized processed cheeses including cottage cheese and cream cheese, and also ice cream that is free of gluten stabilizers. Most children with celiac disease tolerate milk sugar (lactose)-containing milk and yogurt soon after starting a gluten-free diet. Many people are sensitive to casein, the protein in milk so use any dairy with caution or avoid completely. Refer to the Milk Free Handout if this is an issue for your health.
- **Salad Dressing**: Many but not all salad dressings are gluten-free. Apple, wine and rice vinegars are generally acceptable. Apple cider vinegar with lemon juice (try with a touch of avocado too) and salt, Rice wine vinegar with Italian spices or Balsamic vinegar with Olive Oil is delicious.
- **Drinks and Juices**: Freshly brewed coffee, tea, chocolate made from powdered cocoa, carbonated drinks, and juices made from fresh fruit.
- **Condiments and Additives**: Soy sauce that does not contain wheat or barley. There is no evidence that FDA-approved food colorings or monosodium glutamate (MSG) are harmful to persons with celiac disease but many are sensitive. Hydrolyzed or textured soy and corn vegetable protein. Corn malt. Starch (raw or modified from arrowroot, corn or maize, potato, and tapioca). Vegetable gum from carob, locust bean, cellulose gum, guar gum, gum arabic, gum acacia, gum tragacanth, xanthan gum. Oils popular in cooking include: corn, peanut, olive, rapeseed (canola), safflower, soy, and sunflower.
- **Alcohol**

Wine, rum, tequila, and sake are usually safe as their alcohols do not generally come from toxic grains. Some types of vodka (triple distilled) are okay. However, as with any other ingested product, you should gauge your reaction and learn as much about your favored brands as possible.

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HELPFUL WEBSITES:

Glutenfreeworks.com

http://www.naspghan.org/sub/ceciac_disease.asp

<http://www.buckwheathealth.com>

Recognizingceliacdisease.com

<http://mel.org/health/health-celiac.html>

www.csaceliacs.org

COMPANIES THAT SELLS WHEAT-FREE, OTHER GRAIN-FREE, GLUTEN-FREE FOODS:

Ener-G Foods: 1-800-331-5222 or www.ener-g.com

Catalog of all different alternative grain food items. Preparing grains couldn't be easier. The simple "2:1 formula" is almost universal: that is 2 parts water to 1 part grain. Slightly more water is recommended for drier grains like millet, quinoa and amaranth. (Use pure, filtered water, since it is the substance that will hydrate the grain). The cooking time is usually 25 minutes, but cooking time will vary depending on the level of heat used, the type of pan and whether or not it is cooked covered. Try adding cinnamon, ginger, vanilla and other spices to the cooking water. For dinner grains, try cooking with broth and added spices. Another popular method worldwide is to create a pilaff, by sauteing spices and veggies, adding the grain and steaming with water or broth and cooking covered. It's the world of delicious garnishes that makes whole grains fun to have for breakfast. Start with nuts or seeds, which are delicious toasted. Then add a bit of fruit and some sweetener such as real maple syrup or honey. Vanilla yogurt is delicious on breakfast grains, but if you're trying to eliminate dairy products, soy-milk, rice-milk or almond-milk are all good options.

BASIC RECIPES

Substitutions for 1 Cup of Wheat Flour:

7/8 cup rice flour

5/8 cup potato starch flour

3/4 cup spelt flour

1 cup teff flour (no gluten)

1/2 cup arrowroot starch

5/8 cup tapioca starch

1 cup corn flour

3/4-7/8 cup soy flour

Blended Grain Flours:

3/4 cup amaranth + 1/4 cup potato flour

3/4 cup potato mix + 1/4 amaranth flour

3/4 cup amaranth flour + 1/4 cup tapioca starch

3/4 cup quinoa + 1/4 cup tapioca starch

3/4 cup potato mix + 1/4 cup quinoa

3/4 cup soy flour + 1/4 cup carob powder

For Thickening Sauces or Gravies: 1 TBSP flour=1/2 TBSP potato starch, tapioca starch, rice starch or arrowroot starch

For Breading: crushed millet, sesame seeds, rice bran, cassava meal, flaxseed meal

For amaranth, quinoa, millet and steel cut oats, use:

1/2 cup grain 1 1/2 cups water

They will roughly double to triple in size during cooking, so 1/2 cup of dry grain will feed 2 people easily.

Try the following combinations or mix or match condiments to your taste:

- Steel cut oats: serve with toasted almonds, cinnamon, vanilla and maple syrup
- Amaranth: serve with toasted cashews and flax, blueberries and maple syrup
- Millet: serve with sliced bananas, toasted pumpkin seeds and maple syrup
- Quinoa: serve with sliced bananas, toasted cashews and maple syrup

For brown rice use:

1/2 cup rice to 1 cup water or Put any quantity of rice in a small pan and cover with 1 inch water

Bring to a boil for one minute, stir with a fork, cover and reduce heat to low. Cook, covered for 30 minutes. Remove the lid, stir lightly once, remove from heat and keep covered for an additional 10 minutes, then serve with toasted almonds or cashews, cinnamon, maple syrup and vanilla yogurt or other dairy alternative.

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THANKS TO OUR PATIENTS:

Hi Dr. Jen,

I attached the bread recipe the way I make it most of the time.

The recipe book that I have used to make a lot of good stuff is: THE WHOLE FOODS ALLERGY COOKBOOK by Cybele Pascal. She is a mom who had to learn to cook allergy free. The recipes are all dairy, egg, wheat, soy, peanut, tree nut, fish, shellfish free. However it is not completely gluten free b/c she uses spelt, oat and barley flour. I just substitute my own mix of brown rice, tapioca, and potato flour. Some recipes use quinoa flour or corn starch.

4 Flour Bean Blend : Blend and use in recipes cup for cup.

3 C Bean Flour (Garfava or garbanzo)
1 C Sorghum
4 C Tapioca
4 C Cornstarch

Gluten Free Bread Machine Recipe: Farmhouse Bread

Liquid Ingredients:

- 3 large eggs (I use ENERGY Egg Replacer)
- 1/4 C Oil
- 1 1/4 C Rice Milk (Room temp)
- 1 T Raw Apple Cider Vinegar (this is optional)

Dry Ingredients:

- 2 C Brown Rice Flour
- 1/2 C Potato starch flour or Sorghum
- 1/2 C Tapioca Flour
- 3 1/2 t Xanthan Gum (expensive but you only use a little bit in recipes...goes a long way and absolutely necessary to make a gluten free bread)
- 1/4 C sugar (or sweetener)(I use Xylitol, Sucralose and 1 tsp sugar)
- 2 1/4 tsp active dry yeast or bread machine yeast

Mix all liquid ingredients together and pour into bread maker. Mix all dry ingredients except yeast. Spoon the mix over the top of liquid ingredients in bread maker pan. Make a "well" in dry ingredients and place yeast in well. Avoid having yeast touch sides of pan. Start your bread maker. I have an older bread maker so I use the whole-wheat setting w/ medium crust. Newer bread makers have gluten free settings. I make large amounts of the flour combo and keep in airtight container in my freezer. Gluten free flours are less stable and can go rancid quickly so refrigeration or freezing is best.

So:

4 Parts Brown rice flour
1 Part potato starch flour (Can substitute Sorghum Flour)
1 Part tapioca

- FYI: Corn Chex is now gluten free! Along w/ Rice Chex: I use them in place of breadcrumbs in recipes like meatballs and have used them to bread chicken tenders. (Canned coconut milk is awesome to dip the chicken in before the "breading"). I give them a whiz in the food processor and put the extra in a Ziploc.
- Using the various flavors of Rice tortilla chips at the store now I can make "crumbs". I just put them in Ziploc and roll over them w/ a rolling pin.
- Purely Decadent: Makes a dairy free, SOY FREE coconut ice cream dessert. So far I can only get at Whole Foods but I am going to talk to Fry's about that. It's excellent!