



## Gluten-Free Diet: Grains and Flours

This list is intended to be an aid in choosing and enjoying gluten-free foods. Self-management of one's diet requires awareness of foods' content by label reading; awareness of foods' contact with gluten-containing grains; and awareness of foods' contamination by such grains in storage or preparation. Research on the relationship of celiac disease and food items is still limited.

As with the general public, people with celiac disease and dermatitis herpetiformis may also need to consider food allergies. The eight major food allergen groups are:

Milk \* Eggs \* Fish \* Crustacean shellfish \* Tree nuts \* Peanuts \* Wheat \* Soybeans

Self-management is the key to living a full life, gluten-free. Personal application must be based upon understanding one's own tolerances.

### Explanation of Symbols



Consistent with a gluten-free diet at this time.



Questionable due to content, contact, or contamination.



NOT CONSISTENT WITH A GLUTEN-FREE DIET AT THIS TIME.

- acorn [*Quercus* spp.] Sweet edible nut used whole or ground into flour. Flour adds flavor and fiber, but does not bind well.
- almond [*Prunus amygdalus*] Sweet edible nut used whole or ground into flour. This flour, alone or in combination with other flours, is used in breads, cakes and pastries.
- amaranth [*Amaranthaceae*] Many varieties; related to spinach, beets and pigweed. Tiny seeds are commercially available whole, or ground into a light brown flour with a nutty taste. Highly nutritious. Edible leaves.
- arborio rice Short-grain white rice of Northern Italy used for risotto. Cooks up creamy. Similar to the California-grown short-grain variety, pearl.
- aromatic rice Brown or white rice with a natural aroma and flavor similar to roasted nuts or popcorn.
- arrowroot [*Maranta arundinacea*] Herbaceous tropical perennial. The starch, extracted from the rhizomes, is used as a thickener and blends well with gluten-free flours. Interchangeable with cornstarch.
- artichoke [*Cynara scolymus*] Flower head of a thistle-like plant. Used cooked as a vegetable, or dried and ground into flour. Combine flour with rice, potato, and/or tapioca flour for breads and other baked goods.
- BARLEY [*Hordeum vulgare*] The offending storage protein [prolamin] is known as hordein. BARLEY is present in many commercial products as malt, flavorings, colorings, and/or flavor enhancers. May be a part of hydrolyzed plant protein [HPP] or hydrolyzed vegetable protein [HVP].
- basmati rice Very slender, long-grain, highly aromatic rice grown in India and Pakistan. High in flavor; available in brown and white forms.
- beans Seeds of leguminous plants. Used whole as a cooked vegetable; pureed as a thickener, or dried and ground into flour. Many commercial gluten-free bean flours are available. (See legumes.)
- besan (gram, chickpea flour) Pale yellow flour made from ground, dried chickpeas; very nutritious, high in protein. Used in doughs, dumplings, and noodles; as a thickener for sauces; and as a batter for deep fried food.
- black and red rice Rare Asian rice grains with black and red husks and bran coverings. (Also cultivated in California.)
- boil-in-bag rice Rice that is pre-measured, cooked, and packaged in a colander-style plastic bag for quick, convenient cooking.



- ❓ bran (WHEAT, RYE, OAT, corn, rice) The meal derived from the epidermis layer or outer covering of a cereal grain.
- ✅ brewer's rice Tiny particles of rice or rice chips, primarily used as an ingredient in brewing beer or in animal feed.
- ✅ brown rice Kernels of rice from which only the hull has been removed. Cooked brown rice has a slightly chewy texture and a nut-like flavor.
- ✅ brown rice flour Ground form of brown rice with a nutty taste.
- ✅ buckwheat [*Fagopyrum esculentum*] Herb with triangular-shaped seed and black shell, used whole, cracked or ground into flour.
- ❌ BULGUR (WHEAT, burghul) A quick-cooking form of whole WHEAT that has been cleaned, parboiled, dried, crushed or ground into particles and sifted into distinct sizes.
- ✅ calrose A type of medium-grain rice grown in California.
- ✅ canola [*Brassica napus*] Hybrid rape seed developed in Canada, most commonly found as cooking oil.
- ✅ Carolina gold rice Distinctive rice grown in the South Carolina low country, known for its golden outer hull.
- ✅ cassava [*Manihot esculenta*] (tapioca, manioc, yuca) Starch, extracted from the root, is ground into flour, which is used as a thickener for soups, fruit fillings and glazes, much like cornstarch.
- ❓ cereal Any plant from the grass family with an edible seed. The most popular cereal grains are WHEAT, rice, corn, OATS, BARLEY, RYE, millet, quinoa, sorghum, TRITICALE, wild rice, SPELT, and tef.
- ✅ channa Type of chickpea grown in the East Indies. Used whole or ground into flour.
- ✅ chestnut [*Castanea dentata*] Smooth-shelled, sweet, edible nut. Usually roasted, then used whole or ground into flour. (Flour does not bind well.)
- ✅ chickpea (garbanzo) Seed of leguminous plant of the pea family, used whole, pureed or ground into flour. (See besan.)
- ✅ converted® Registered trade-mark used to describe parboiled rice.
  
- ✅ corn [*Zea mays*] Maize, cereal plant native to the Americas. Kernels are largest of cereal seeds. Six major types are dent, flint, flour, sweet, pop and pod corns. Used whole or processed into a multitude of products including sweeteners, flours and oils.
- ✅ corn flour Finely-milled flour from the entire kernel of corn. Can be blended with corn meal and small amounts of other flours for making cornbread and cornmeal mush. Found in white, yellow and blue varieties.
- ✅ corn gluten Nutrient supplement.
- ✅ corn malt Flavoring agent.
- ✅ cornmeal Coarse grade of milled corn flour. (Not a substitute for cornstarch or corn flour.) Found in white, yellow and blue varieties.
- ✅ cornstarch Thickener derived from corn.
- ✅ cottonseed [*Gossypium hirsutum*] Used as a seed or ground into flour; seeds typically pressed and used as an oil for margarine or cooking oil.
- ❌ COUSCOUS (WHEAT) Granular semolina dish of steamed, crushed, cooked grain.
- ✅ dal (dhal) Split peas or beans from India; used whole, pureed, or ground as flour.
- ✅ dasheen flour (eddo flour) Variation of taro flour, used as a thickener. (See taro flour.)
- ✅ della rice Cross of long-grain rice and basmati rice, developed in the United States.
- ❌ DI NKLE (WHEAT, spelt) Common name for spelt.



-  DURUM [*Triticum dicoccum*] (WHEAT) Variety of the Triticums; has high gluten content and is mainly used for pasta.
-  edible starch Can be WHEAT starch or a mixture of several starches.
-  EINKORN [*Triticum monococcum*] (WHEAT) Primitive small-grained WHEAT of Europe and Asia. Einkorn WHEAT represented on some labels as non-glutinous, low-gluten or listed as a corn or maize product.
-  EMMER [*Triticum dicoccum*] (WHEAT) Another name for durum WHEAT. Yields glutinous flour used in pastas.
-  enriched rice White rice with some of the nutrients, mainly the B vitamins, iron, niacin and folic acid, restored after the milling process.
-  farina, farinaceous Fine flour or meal made from cereal grains or the starch of vegetables.
-  FARINA® (WHEAT) A hot WHEAT cereal.
-  fava bean (faba) Legume. Used whole, cooked as a vegetable or ground into flour. Unrelated to celiac disease, favism is an allergic reaction to fava beans that can be life threatening. Favism is most common in those of Mediterranean descent.
-  flaxseed [*Linum usitatissimum*] Seed of ancient medicinal herb, with a nutty flavor. Used whole, toasted or sprouted; ground into meal; or pressed into oil. High in fiber.
-  flour Finely-ground form of a product. Source may be plant, animal or mineral.
-  food starch Can be WHEAT starch or a mixture of several starches.
-  FU (WHEAT) Dried form of gluten, typically from WHEAT if made in Asian countries. (Should not be confused with tofu, which is made from soy.)
-  garbanzo (chickpea) Seed of leguminous plant of the pea family. Used whole, pureed or ground into flour. (See besan.)
-  GLIADIN Naturally occurring simple proteins (gluten peptides) found in the gluten of WHEAT.
-  GLUTEN Storage protein of WHEAT. Used as an umbrella term, although technically not correct, to include storage proteins of BARLEY, RYE, and OATS.
-  GLUTEN PEPTIDES Term used to describe smaller units of proteins from WHEAT, BARLEY, RYE, and OATS.
-  GLUTENIN Naturally occurring simple proteins (gluten peptides) found in the gluten of WHEAT.
-  glutinous rice The term glutinous refers to its sticky texture when cooked. White, brown, or black rice characterized by broad, short grains that stick together during cooking; mainly used in Asian sweet snacks; also known as sweet rice, sticky rice, or waxy rice.
-  glutinous rice flour (sweet, mochiko) Works well as a thickener in sauces and soups. Sauces thickened with sweet rice flour will not separate when frozen and thawed.
-  GRAHAM flour (WHEAT) Graham flours are WHEAT flours, not to be confused with gram flour from chickpeas.
-  gram flour (besan) Made from chickpeas.
-  granary flour May be a combination of flours based on cereal grains.
-  grits Any coarsely ground grain. Used as a cereal or a side dish.
-  groats Hulled crushed grain. Used as a cereal, side dish, or as a thickener in soups.
-  hemp (Industrial) No research on the dietary use of hemp for a celiac diet is on file in the CSA office. Should be gluten-free but sample of hemp flour tested ELISA 15 ppm gliadin in 2001.
-  hominy White or yellow corn kernels from which the hull and germ have been removed. Used canned as a side dish or in casseroles.
-  hominy grits Side dish of coarsely ground dried hominy.



- ❓ hulls Outer inedible covering or husk layer that encloses any grain kernel. Industrial uses.
- ✅ instant rice Rice that has been precooked and dehydrated.
- ✅ japonica rice Specialty rice, typically used for rice stuffing and side dishes.
- ✅ jasmine rice Variety of aromatic rice.
- ✅ Job's tears [*Coix lachryma-jobi*] Seed of ancient annual grass, resembling large barley. Used as a substitute for pearl barley.
- ❌ KAMUT [*Triticum polanicum*] (WHEAT) Kernels are 2-3 times larger than WHEAT.
- ✅ kasha Roasted buckwheat groats, with a toasty, nutty flavor. Russian kasha may also contain millet and oats.
- ✅ koshihikari Variety of Japanese rice, now being cultivated in the United States.
- ✅ kudzu Leguminous Asian plant whose roots yield a starchy powdered extract, used as a thickener. Leaves and stems are also edible.
- ✅ legumes, leguminous Plants with seeds in pods. There are more than a hundred legumes including: peanuts, lentils, peas, soya, beans, channa, garbanzo (chickpea, gram). Versatile served as vegetables, dried and ground into flour, or pureed. May be processed into oils or butters.
- ✅ lentils Tiny lens-shaped seeds of a leguminous plant. The three main varieties are: French/European lentil, Egyptian/red lentil, and yellow lentil.
- ✅ long-grain rice Brown or white rice kernels, averaging five times as long as they are wide.
- ✅ maize, maiz, masa harina Other names for corn or corn flour.
- ❓ malt Artificially germinated and dried seeds of grain, typically BARLEY or corn, ground into a powder. Malt is the basis for a variety of flavoring agents. Corn malt is gluten-free.
- ✅ manioc [*Manihot esculenta*] (cassava, tapioca, yuca) Starch, extracted from the root, is ground into flour, which is used as a thickener for soups, fruit fillings and glazes, much like cornstarch.
- ❌ MATZA, MATZO, MATZAH (WHEAT) Traditional Jewish unleavened bread made from WHEAT.
- ✅ millet [*Panicum miliaceum*] Drought-tolerant grasses with small seeds which can be substituted for sorghum in most recipes.
- ✅ milo Versatile grain used whole, cracked or as a flour. (See sorghum.)
- ❌ MIR. [*Mironovskaya* spp.] (WHEAT and RYE cross) Many variations.
- ✅ modified corn starch Corn starch chemically modified to improve properties for commercial uses.
- ❓ modified food starch (WHEAT, corn, potato, tapioca) Starch that has been modified by rearranging the molecules.
- ✅ modified tapioca starch Tapioca modified to improve consistency, stability and flavor.
- ✅ nuts Tree nuts and peanuts (a legume) do not contain gluten. Used whole or processed into butters or oils.
- ❓ nuts, dry roasted Processing agents may contain WHEAT flour or flavorings.
- ❌ OAT bran Meal derived from the epidermis layer or outer covering of the OAT grain.
- ❌ OAT fiber Used commercially in a variety of products. High fiber content.
- ❌ OAT gum Stabilizer found in processed meats and cheeses.
- ❌ OATS [*Avena sativa*] Storage protein, (prolamin), is known as avenin. Controversy exists whether pure OATS are problematic for those diagnosed with celiac disease and dermatitis herpetiformis. OAT prolamins comprise only about 10-15% of the total protein in OATS, much less than in wheat, barley, or rye.
- ✅ peanut [*Arachis hypogaea*] Seed of a leguminous plant. Used whole, ground into flour, or processed into an oil or butter.



- ✔ pearl rice California short-grain; white kernels very plump and almost round.
- ✔ polished rice Regular milled white rice. The outer husk is removed, and the layers of bran are milled until the grain is white.
- ✔ popcorn Variety of corn suitable for popping. Unpopped kernels may be milled into a light corn flour. Popped corn may be pulverized and added to ready-to-eat breakfast cereals, or used as soup/salad toppers.
- ✔ popcorn rice Grown in Louisiana, this long-grain rice is cross between basmati and regular rice. (Tastes like buttered popcorn, but the scent is stronger than the flavor.)
- ✔ potato flour Commercially ground from the whole potato, used as a thickener. Retains potato flavor.
- ✔ potato starch flour, potato starch Commercially prepared from cooked potatoes that are washed of all fibers until only the starch remains.
- ✔ precooked rice White or brown rice that has been completely cooked and dehydrated after milling.
- ❓ prolamins Any class of simple amino acid strings high in proline and glutamine. Gliadin and glutenin are the prolamins for WHEAT, zein for corn, hordein for BARLEY, secalin for RYE, and avenin for OATS.
- ✔ quinoa [*Chenopodium quinoa* Willd.] Seed of ancient cereal grain of Peru, related to amaranth. Mild nutty flavor. Versatile; can be substituted for any grain. Used whole; as a hot cereal; ground into flour. Adds moisture to baked goods.
- ✔ red rice Type of rice grown in South Carolina. (Also refers to a dish consisting of tomatoes and rice.)
- ✔ rice [*Oryza sativa*] ("Races" called Indica, Japonica, and Sinica) Semi-aquatic member of the grass family. Rice is gluten-free and non-allergenic. Categorized as short, medium and long, the edible seed is the staple grain for over half the world's population.
- ✔ rice bran Outer layer of brown rice; an excellent source of thiamin, niacin, vitamin B-6, iron, phosphorus, magnesium, potassium and fiber.
- ✔ rice bran oil Mild-flavored oil extracted from rice bran; has a very high smoking point which makes it suitable for frying.
- ✔ rice couscous Cracked rice resembling a cracked wheat product called couscous.
- ✔ rice flour, white rice flour Ground form of rice that is gluten-free and non-allergenic.
- ✔ rice hulls Outer inedible covering protecting the rice kernel--industrial uses.
- ✔ risotto Creamy Italian rice dish in which rice is sautéed and cooked in broth.
- ✔ rosematta Parboiled rice from South India. The bran gives an attractive rose color.
- ✔ rough rice Rice, as it comes from the field, also known as paddy rice. Rough rice kernels are encased in an inedible, protective hull.
- ❌ RYE [*Secale cereale*] The offending storage protein (prolamin) is secalin. Used as flour for baking bread. Grain may be fermented to produce alcoholic beverages or industrial alcohol.
- ✔ saffron [*Crocus sativus*] Derived from the dried stigmas of a purple-flowered crocus. Used to color and flavor foods.
- ✔ sago Starch extracted from tropical palms, and processed into flour, meal, or pearl sago (similar to tapioca.) Used as a thickener.
- ❌ SEITAN (WHEAT, wheat meat) Made from WHEAT gluten. Used in vegetarian and Asian dishes.
- ❌ SEMOLINA (WHEAT) Coarsely ground durum WHEAT. Mainly used for pasta.
- ✔ sesame White, brown or black seeds. Used whole, ground as flour, or pressed into oil.
- ✔ short-grain rice Brown or white rice kernels that are much thicker than long-grain varieties. Grains are soft and stick together when cooked.



- ✔ sorghum, milo [*Sorghum bicolor* L. Moench] Drought-tolerant cereal grain used primarily as a flour or sweet syrup. Third most prevalent food crop worldwide. Certified food grade white sorghum has been specially developed for the food industry.
- ✔ soy, soybean [*Glycine max* L. Merr] (soya, kinako, edamame) High- protein, high-fat legume, which is processed into a variety of food products. Oil is used in cooking and salad dressings. Flour has strong, distinctive, nut flavor. Most recipes are designed to use low-fat soy flours; soy milks and tofu use high-fat soy flours.
- ✘ SPELT [*Triticum spelta*] (WHEAT, dinkle, farro, dinkel) Ancient cereal grain with a mellow nutty flavor.
- ✔ starch Reserve poly-saccharide in plants. Starches from many sources are used commercially as thickeners and gelling agents. In the U.S. , when the single word "starch" appears on a food label, the source must be corn. CFR Title 21, Section 578.100 October 1, 1980. (This does not apply to starch in pharmaceuticals).
- ✔ sunflower seed Can be dried or roasted and eaten as a snack; used in salads or sandwiches; or added to a variety of cooked dishes and baked goods. Oil is used in cooking and salad dressings. The seed may be finely ground and added to flour combinations for a dark color and nutty taste.
- ✔ sweet potato [*Ipomoea batatas*] Tropical American vine of the morning glory family, cultivated for its fleshy , tuberous orange-colored root. Used cooked as a vegetable, or dried and ground into a flour.
- ✔ sweet rice flour Glutinous waxy rice, containing more starch than the brown and white rice flours. Excellent thickener; binds and reduces separation in sauces that are to be frozen and then reheated. (Cannot substitute for brown or white rice flours.)
- ✔ tapioca Starchy substance extracted from the root of the cassava plant, used mainly in puddings. Tapioca flour is used as a thickener, especially in fruit dishes because it produces a clear gel. Adds "tooth" to gluten-free breads. (See cassava and manioc.)
- ✔ taro flour Commercially processed from a starchy tropical root. Used as a thickener, similar to tapioca.
- ✔ tef [*Eragrostis tef*] (tef grass or teff) Very small black ancient grain of the millet family. Principal grain in Ethiopian bread (Injera), which is described as a soft, porous, thin pancake.
- ✔ texmati A variety of aromatic rice.
- ✘ TRITICALE [*Triticosecale* sp.] (WHEAT, RYE) Hybrid cross of WHEAT and RYE.
- 🤔 udon Japanese noodles made from WHEAT or corn.
- ✔ urd Variety of green gram or bean cultivated in India.
- ✔ Valencia rice A short-grain rice.
- ✔ water chestnut Edible tuber of a water plant. Used fresh, canned or dried. Dried water chestnuts may be ground to a flour or powder and used as a thickener, or for coating foods prior to frying.
- ✔ waxy rice flour See glutinous rice and sweet rice flour.
- ✔ wehani rice California-grown hybrid rice with Indian basmati in its ancestry; reddish color; very nutty aroma and flavor.
- ✘ WHEAT [*Triticum aestivum*, *Triticum vulgare*, *Triticum dicoccum*, *Triticum monococcum*] World's largest cereal grass crop. Offending prolamins are glutenin and gliadin. All WHEAT and WHEAT products contain varying amounts of these prolamins. Used whole, cracked, ground into flour, or processed into oil. There are many varieties of WHEAT, the triticums.
- ✘ WHEAT berry The kernel of WHEAT.
- ✘ WHEAT germ The embryo of WHEAT.
- ✘ WHEAT germ oil Derived from WHEAT. Gluten level will vary by product.
- ✘ WHEAT grass Leaves of WHEAT. There is no research available on the gluten content.
- ✘ WHEAT gluten The natural protein derived from WHEAT. Also, powdered form of seitan.



- ❌ WHEAT nut Any Triticum WHEAT, soaked or boiled and then dried to be sold as "WHEAT nuts".
- ❌ WHEAT starch By-product of WHEAT processing. Cannot be guaranteed to be 100% gluten-free. Sometimes added to food items during processing. No form of WHEAT starch is considered appropriate for a zero tolerance level gluten-free diet in the United States and Canada. Codex WHEAT starch is considered gluten-free by some foreign governments. Gluten level must be 200ppm or less to be labeled as Codex WHEAT Starch [Europe].
- ✅ wild rice [*Zizania aquatica*] Seed of plume -topped wild aquatic grass found mainly in the United States and Canada. Can be used whole or milled into a dark flour.
- ✅ wild pecan rice Aromatic long-grain rice grown in Louisiana. Named for the strong aroma and milder, but distinct nutty taste.

#### RESOURCES

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