

Gluten-free diet

People who are experiencing sensitivities to various grains are actually sensitive to gluten, which is the protein component of the grains; **wheat, rye, barley, triticale, spelt and oats**. (Triticale is a wheat/rye hybrid grain used in modern farming.) Even tiny amounts of gluten can cause harm to a sensitive system. It is not fully understood why some people are sensitive to gluten. If one or both of your parents are gluten sensitive you have a much greater chance of being sensitive yourself. However, for many American's gluten sensitivity is not a genetic issue. The problem is over consumption of grains. If you eat the same processed foods day after day, they will eventually become an irritant to your digestive system.

If gluten irritates your small intestine the delicate interior lining called the *villi* will be damaged. If this continues for more than a few days at a time your ability to absorb nutrients will be compromised. Untreated, this can result in a range of disorders including malnutrition, osteoporosis, irritable bowel syndrome (IBS), leaky gut syndrome, environmental allergies, auto immune issues, or increased food sensitivities. A strict gluten free diet allows the microscopic finger-like projections of the small intestine (villi) to recover and assist in normal absorption of nutrients.

The symptoms of gluten sensitivity are similar to those of other disorders, but may include:

- Anemia
- Digestive upsets, such as flatulence and bloating
- Diarrhea or constipation
- Nausea
- Vomiting
- Abdominal pains and cramps after eating
- Weight loss
- Weight gain
- Fatigue and generalized malaise.
- IBS (irritable bowel syndrome)

Gluten and gliadin

Gluten is a protein found in **wheat, rye, barley, triticale, spelt and oats**. The component of gluten that causes the most problems for people who are sensitive is the prolamine fraction. The prolamine fraction in wheat is called gliadin; in rye, it is called secalin; in barley, it is hordein; and in oats, it is avenin.



Can I Eat Oats???

A common question from people on a gluten free diet is, “can I eat oats”? Because the prolamine fraction of oats is not really gluten, you may or may not be sensitive to oats. The best way to check is by muscle test. You may only be sensitive to the prolamine in wheat (gluten) or you may be sensitive to all prolamines.

Foods to avoid

Individuals with gluten sensitivity should avoid any foods that contain gluten. It is important to read the labels of all packaged or prepared foods. Some foods that may contain gluten include:

Meat products - any products prepared with breadcrumbs or batter, most sausages and other processed meats, thickened soups, meat pies and frozen meals.

Dairy products - malted milk, some flavored milks, cheese spreads, ice cream in a cone, many types of custard and many soymilks contain gluten.

Fruits and vegetables - canned and sauced vegetables, textured vegetable protein (found in some vegetarian products) and fruit-pie filling.

Cereal and baking products - wheat, unspecified corn flour, semolina, couscous, wheat bran, barley, oats, porridge, breakfast cereals containing wheat, rye, oats or barley, corn or rice cereals containing malt extract, icing sugar mixtures and baking powder.

Pasta and noodles - spaghetti, pasta, lasagna, gnocchi, soba noodles and two-minute noodles.

Bread, cakes and biscuits - all bread, cakes and biscuits prepared with flours that contain gluten.

Condiments - malt vinegar, many mustards (read labels), relishes, some pickles, some salad dressings, sauces, gravy and yeast extracts.

Drinks - cereal coffee substitutes, beer, stout, ale, Guinness and lager.

Gluten free foods

Despite the restrictions, a person with gluten sensitivity can still enjoy a wide and varied diet if they take an open-minded approach. **Corn, rice, soy, potato, buckwheat, millet, quinoa, wild rice, lentils and amaranth are all gluten free.**

Meat products - plain meat, fish, chicken, bacon, ham off the bone and meats that are frozen or canned but with no sauce.

Dairy products - eggs, full cream milk, low fat milk, evaporated milk, condensed milk, fresh cream, processed or block cheese and some soymilks.

Fruits and vegetables - fresh, canned or frozen but not sauced; fruit juices, nuts and peanut butter.

Cereals - breakfast cereals made from corn, rice, buckwheat, amaranth, arrowroot and quinoa without malt extract added.

Baking products - amaranth, arrowroot, buckwheat, corn flour (from maize), cornmeal, Soya flour, lentil flour, rice (all types), rice flour, rice bran, potato flour, millet, polenta and psyllium.

Breads, crackers, tortillas and biscuits - most rice crackers, corn cakes (made with corn flour only – most corn bread from a box has wheat flour added), rice crisp breads, corn tortillas and corn taco shells. Most organic foods markets carry several 'gluten free' breads made with rice or potato flour.

Pasta and noodles - gluten free pasta, rice noodles, bean vermicelli and 100% buckwheat noodles.

Condiments - tomato paste, tahini, jam, honey, maple syrup, cocoa, all kinds of vinegars (except malt), some sauces and some salad dressings.

Snacks - plain chips and corn chips, popcorn and plain chocolate.

Drinks - tea, coffee, mineral water, wine, sports drinks, spirits and liqueurs (check these for gluten-containing ingredients first).

Food labeling cautions

Packaged foods have ingredient labels stamped on the box, but products are not always labeled if they are 'gluten free'. Also, the ingredient label may not list 'gluten', but it can be present within other ingredients such as thickeners, which could be wheat-based.

Suggestions on making the switch to gluten free baking

In some cases; you can modify existing recipes for cakes and biscuits to make them gluten free. Gluten is the ingredient in wheat that helps the cooked product to hold together, so you will need to use some other types of 'binding' agents. Be prepared to experiment, and accept that a few of your first attempts may be unsuccessful.

- Replace the role of gluten with xanthan gum or guar gum powders. These products are available from some celiac societies and some supermarkets such as Whole foods or Mississippi Food Co-op.
- Try adding more gluten free baking powder to cakes.
- Add an additional egg to pancake batters.

Make your own flours

The following mixtures may be used to make adequate flour substitutes:

- **Self-raising flour** – two tablespoons potato flour, sufficient white rice flour to make it up to one cup, half a teaspoon of bicarbonate soda, half a teaspoon of cream of tartar, one teaspoon of xanthan gum (or guar gum).
- **Plain flour** – combinations include: two cups rice flour, two thirds cup potato flour and one third cup tapioca flour; equal portions of Soya flour and cornstarch (from maize); equal portions of Soya flour and potato flour; equal portions of Soya flour and rice flour.
- **Sweet pastry** – 60g cornstarch (from maize), three quarters cup milk powder, one and a half cups coconut, 120g melted butter.
- **Baking powder** – one quarter cup bicarbonate soda and half cup cream of tartar.

Final Suggestions:

The best substitutes for pasta and bread at dinner time are:

Rice – There are many types of rice. Try brown rice and wild rice.

Potatoes – Try different types of potatoes.

Quinoa – Yes that's how it's spelled. Quinoa is a very tasty grain from South America and you cook it just like you would rice. You can find it in most stores near the rice and other dry grains. There are white, yellow and red quinoa varieties. Each has a different flavor.

Beans – are both a healthy carbohydrate and a good source of protein.