

## Living Wheat-Free



Wheat is commonly used by food manufacturers in a wide range of food products. But a small percentage of individuals have a true allergy to this valuable staple of the American diet. Proper diagnosis should be done by a qualified physician as gluten intolerance or celiac disease is often confused with wheat allergy. The majority of young children will outgrow their wheat allergy. But adults who develop the allergy will probably have to remove wheat from their diet indefinitely. Because it is so difficult to purchase ready-made foods that are completely wheat-free, the following information offers tips to making the task of living wheat-free easier.

### Allergy Versus Intolerance

The difference between wheat allergy and wheat intolerance is how the body reacts to the ingestion of wheat. A true food allergy causes the immune system to recognize the offending-substance in the wheat as foreign and begin to produce antibodies to halt the invasion.

Swelling of the lips, stomach cramps, vomiting, diarrhea, hives, and/or wheezing or breathing problems are the most common reactions. As a result, wheat and wheat-containing foods must be avoided altogether.

Wheat Intolerance is usually a hereditary disorder of the immune system itself. The eating of a protein known as gluten in wheat causes damage to the digestive tract. This results in malabsorption of nutrients which may lead to deficiencies.

### Reading Labels

Because wheat flour is so common in prepared foods, it is important to read labels. Amazingly enough, even some hot dogs, catsup, ice cream, and supplements may contain wheat!

Look for the following terms listed in the ingredient label if you have a wheat allergy. These terms should be avoided: **bran, bread crumbs, bulgur, cereal extract, couscous, cracker meal, durum, farina, gluten, graham flour, high gluten flour, high protein flour, semolina, spelt, vital gluten, wheat bran, wheat germ, wheat gluten, wheat malt, wheat starch, and whole wheat or enriched flour.**

Other ingredients that may indicate the presence of wheat protein include: gelatinized starch, hydrolyzed vegetable protein, kamut, modified food starch, modified starch, natural flavoring, soy sauce, starch, vegetable gum, and vegetable starch.

Although there are products on the market catering to the wheat-free lifestyle, home baking may be your best alternative.



## Baking Substitutes

Barley, buckwheat, rice, rye, oat, and potato starch flours or a mixture of these provides satisfactory substitutes. Some of these flours may only be available from specialty stores and may cost more than all-purpose flour. However, the nutritional content may be higher because these flours are less refined.

Soy flour is oily and has a strong flavor but blends well with potato flour. Other flours may also have different characteristics than wheat flour. Using a combination of other flours will allow you to make products more like wheat flour products. You will need to do some experimentation, so expect a few failures!

In general, products made with other flours tend to be drier, coarser, and heavier. The gluten-free flours rise well, but adding one teaspoon of xanthum gum per cup of flour along with the amount of baking powder or soda called for in the recipe, may improve the texture. The addition of fruits, nuts, or vegetables (carrots, pumpkin, zucchini) when appropriate will improve the moisture content and texture as well.

Try these flour substitutes in baking.

One cup of wheat flour equals:

- 1 cup of rye meal
- 1 to 1 ¼ cups rye flour
- 1 cup potato flour
- 1 1/3 cups rolled oats or oat flour
- ½ cup potato flour + ½ cup rye flour
- 5/8 cup potato starch
- 7/8 cup rice flour
- 5/8 cup rice flour + 1/3 cup rye flour
- 1 cup soy + ¼ cup potato starch flour
- 1 cup corn flour



Toasted oats make good substitutes for bread crumbs, crumb toppings, wheat germ, or unprocessed bran. Bake 1 to 2 cups of uncooked rolled oats on a nongreased cookie sheet at 350° F for 20 minutes or until lightly browned. Cool and store for up to six months in the refrigerator in an airtight container.

## Sauce Substitutes

Gravies, sauces, soups, stews, and puddings, can be thickened successfully using homemade ground oat flour as a substitute. To grind the oats, use a blender or food processor. Grind 1 ½ cups of uncooked rolled oats for about one minute or until the oats are the consistency of cornmeal. Store the oat flour in an airtight container for up to six months. One tablespoon of oat flour is equal to one tablespoon of wheat flour.

Gravies, sauces, and soups made with ground oat flour will taste the same as those made with white flour. The color will be darker and the texture will be slightly grainier because the oats are whole grain.

If you cannot use oat flour because of oat allergy or gluten sensitivity, the following equivalencies are equal to one tablespoon of wheat flour:

- 1 ½ teaspoon potato starch flour
- 1 ½ to 3 teaspoons rice flour
- 1 ½ teaspoons arrowroot starch
- 2 teaspoons tapioca flour

## Resources

- Food Allergy Network, [www.foodallergy.org](http://www.foodallergy.org)
- WebMD Medical Reference, "Living with Wheat Allergy," <http://my.webmd.com>
- Food & Allergy Anaphylaxis Network, "Common Food Allergens," <http://www.foodallergy.org/allergens.html>

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