

**W**hat's in your cake, bread, scone, pasta, pizza? To understand flour it helps to understand the wheat grain, which is made up of three parts: the endosperm (the starchy part), the germ (protein and vitamins) and bran (fibre). White flour is made from the endosperm only, while whole-wheat flour is made from the entire grain.

Gluten is the protein-laden substance present in cereal grains, especially wheat, which gives dough its elastic texture. Caterer and baking expert Julie Hogg says that the gluten content of flour is influenced by various things.

"The finer the milling, the greater the gluten content," she says, "as other components like the husk and the wheat germ are removed."

Those who have a gluten intolerance, also known as celiac disease, should examine labels carefully when buying so-called gluten-free flour. Some mills produce grains containing gluten as well as gluten-free products, and it is possible that contamination might occur.

"Wheat flour is the most common flour in South Africa," says consulting chef Arnold Tanzer. "The most common types are cake, bread and self-raising flours, but you can also get speciality flours."

"There are flours made from other grains, such as rye, rice and even potato, which is not a grain," says Julie. "These may have less or no gluten in them and are either mixed with wheat flour to make a more pliable dough that is less cakey, or used alone to make gluten-free bread".



**Buckwheat flour**

### **White flour**



Julie says that barley, rye and oats contain some gluten, while buckwheat, corn, rice and a few others are gluten-free. Here's a guide to help you find the right flour for your baking needs.

### **White flours**

- **CAKE FLOUR** is made from the endosperm, the softest part of the wheat kernel. It is bleached to make it white and to break down the protein in the flour, which enables it to carry a high volume of sugar. The fine grain also absorbs butter and other fats easily, which makes a smooth batter. White bleached flour contains no wheat germ and bran. Unbleached flour contains more protein than bleached flour and can be used for items like puff pastry and Yorkshire pudding.
- **BREAD FLOUR** is a high-protein flour best used for making yeast breads. The protein and a small amount of malted barley in the flour helps the yeast rise and retain gases as it bakes, resulting in volume and texture. White bread flour is less finely milled than cake flour, contains less gluten and is slightly cheaper. Brown bread flour is rich in fibre, light brown and suited to the production of yeast-leavened brown bread.
- **SELF-RAISING FLOUR** is used for quick tea breads, pancakes, muffins, soda bread, scones and rusks. Sodium bicarbonate and calcium phosphate are mixed into the flour and act as raising agents. If your recipe calls for self-raising flour and you only have cake flour, add one teaspoon of baking powder for every cup of cake flour.





Soy flour

### Other grain flours

• **BUCKWHEAT FLOUR** is made from buckwheat, which is considered a cereal grain. It is brownish in colour with a bitter, earthy flavour. It contains no gluten and does not rise when cooked. If baking bread or cakes with buckwheat you'll need to add some normal flour for them to rise. Noodles, flatbreads, blinis, polenta and biscuits can be made from buckwheat flour. It is rich in vitamins A and B and calcium and high in protein. It will last for up to six months if stored in an airtight container at room temperature. Unrefined buckwheat flour should be stored in an airtight container in the fridge as it is more perishable.

• **RYE FLOUR** is used extensively in bread in countries with cold, wet climates not suitable for wheat cultivation. Light and medium rye flours are produced from the endosperm, while dark rye includes the whole grain, resulting in a coarser flour which adds more texture to the bread. Rye contains gluten and the dough is sticky and difficult to handle, necessitating the addition of other flours in machine-made rye bread. Rye flour lasts for several months if kept in a cool, dry and dark place.

### Soy flour

Soy flour is made from roasted soy beans that have been ground into a fine powder. It has a creamy yellowish

colour and a nutty flavour and can be used in biscuits and as a soup thickener. Soy beans are an excellent source of vegetable protein, fibre, vitamins and minerals. Soy flour is sometimes combined with wheat flour to make healthier breads (use one part soy flour to 20 parts wheat flour). Always stir soy flour before measuring it out, as it can become compressed in its container.

### White rice flour

White rice flour is ground from polished white rice and is gluten-free. Use it as a substitute for wheat flour in egg-rich recipes such as biscuits and some breads. It can also be used as a thickener in soups and casseroles. It is an excellent basic flour for gluten-free baking, and its bland flavour makes it a good mix with other flours. You can also make porridge out of rice flour. Add potato flour to white rice flour for improved consistency. If you are using white rice flour on its own, substitute three-quarters of a cup of white rice flour for one cup of wheat flour. For a nutritious basic flour mixture, add the same amount of potato and soy flours to the white rice flour.

### Brown rice flour

Brown rice flour is made from unpolished brown rice and has more nutrients than white rice, as it contains bran. It can be used in breads, muffins, biscuits, porridges, soups and stews. Brown rice flour is gluten-free. It should be stored in an airtight container in the fridge to avoid moisture or odours. Rice flour contains natural fats and oils which may go rancid, so buy it in small batches and use within a few weeks.

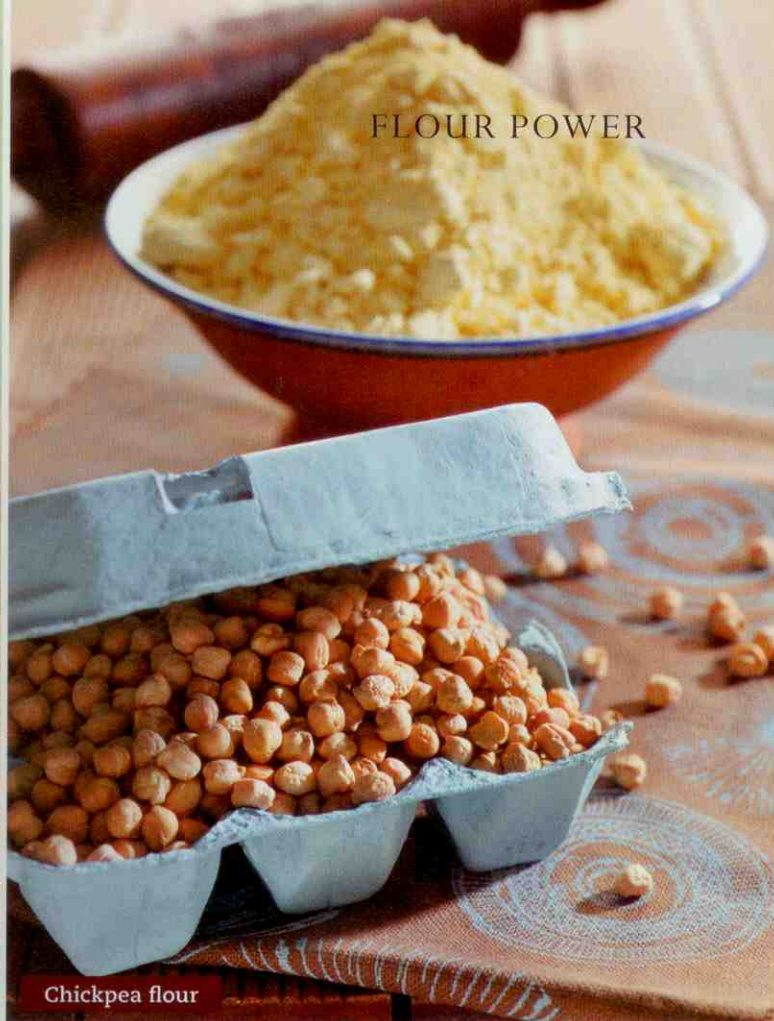
### Chickpea flour

Chickpea flour is made from chickpeas, a rich source of essential fatty acids, complex carbohydrates, vitamins and minerals. It can be used as a thickening agent for stews, patties, spreads, hummus and falafel. It can also be used as a thickener in place of eggs – one to two tablespoons replaces one egg.

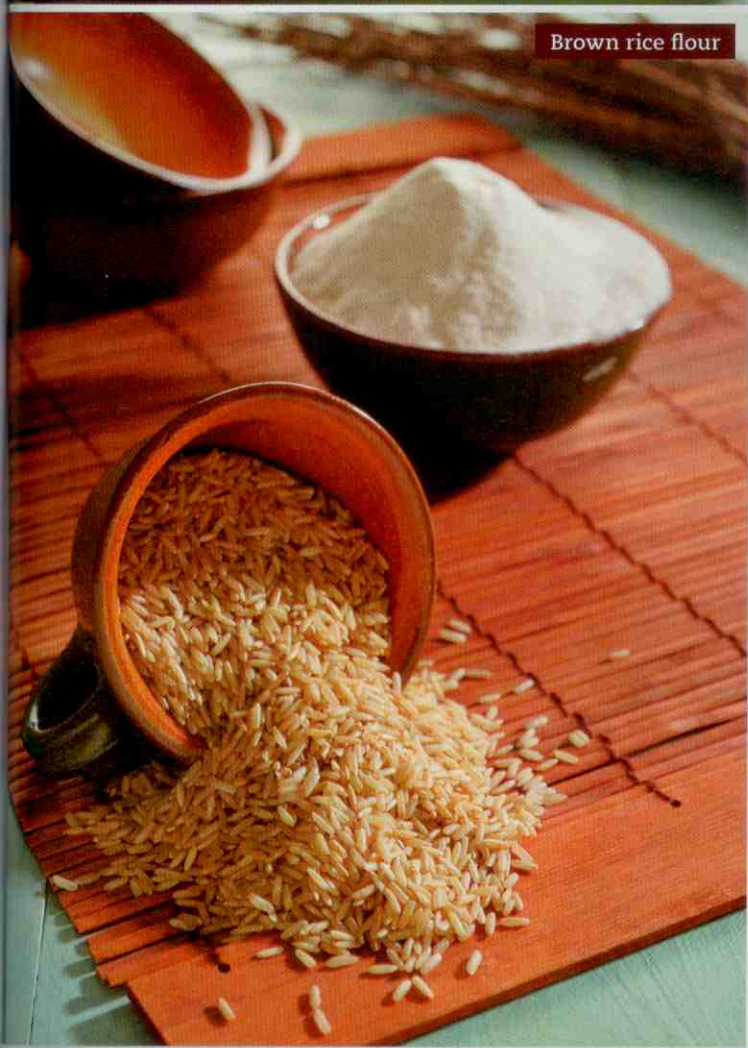




White rice flour



Chickpea flour



Brown rice flour

## FLOUR POWER

### Other flours

- **Oat flour** is ground from dry oats and has a nutty flavour.
- **Quinoa flour** is made from the ground seeds of the quinoa plant (a leafy plant related to silver beet and spinach).
- **Spelt flour** is an ancient type of grain, similar to wheat in appearance but with a nuttier and sweeter taste.
- **Potato flour** is ground from dehydrated potatoes and can be used as a thickener as well as for bread, pancakes and waffles.
- **Semolina flour** is made from durum wheat and used to make pasta. It is light yellow in colour.
- **Farina flour** is fine flour made from wheat, nuts and potatoes. In the United States it is known as cream of wheat.
- **Doppio zero flour** is numbered 00, which refers to how finely ground the flour is. In Italy, flours are numbered 1, 0 and 00. Double zero is used to make pasta and pizza dough.

