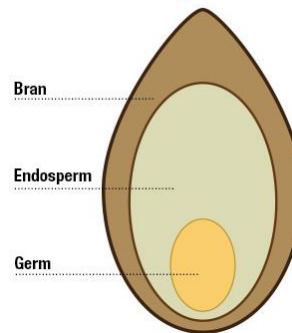


WHOLEGRAINS

A huge variety of cereal crops are grown for food throughout the world including wheat, rye, barley, oats and rice. Grains are the seeds of these cereal plants. The entire grain or 'wholegrain' is made up of three elements:

- a fibre-rich outer layer – the bran
- a nutrient-packed inner part – the germ
- a central starchy part – the endosperm

Grain Anatomy



During the milling process, the bran and the germ are often removed to give a 'whiter' cereal

What do wholegrains contain?

Most of the goodness in grains is in the outer bran layer and germ of the seed so wholegrains can contain up to 75% more nutrients than refined cereals. Wholegrains provide:

- fibre
- B vitamins and folic acid
- essential fatty acids (omega-3 fats)
- protein
- antioxidants including vitamin E, selenium
- micronutrients like copper and magnesium
- other parts of the plant (phytochemicals) which may have health benefits.

Why should we choose wholegrains?

Evidence is growing that eating wholegrains regularly as part of a healthy diet and lifestyle helps to keep us healthy and may also help to reduce the risk of many common diseases.

Research suggests that:

1. Wholegrains are usually low in fat but rich in fibre and starchy carbohydrate and often have a low glycaemic index (GI). This means they provide a slow release of carbohydrate into the blood which, together with fibre content, may help to prevent fast rises in blood glucose and keep you feeling fuller for longer so you aren't tempted to snack.

2. The risk of heart disease, stroke and type 2 diabetes may be up to 30 per cent lower in people who regularly eat wholegrains as part of a low-fat diet and healthy lifestyle.
3. Some of the fibre provides a food source for 'friendly' gut bacteria helping them to increase and produce substances which are thought to protect the gut wall and help with weight management.
4. Wholegrains may help in maintaining a healthy body weight over time as part of a healthy diet and lifestyle as they keep you fuller for longer so you are able to manage your appetite.
5. The risk of developing some forms of cancer of the digestive system like bowel cancer may be reduced with higher intakes of wholegrains. Some of the fibre moves food along more quickly and easily, reducing the time that damaging substances are in contact with the gut wall.

What's the difference between wholemeal, wholewheat, wholegrain and granary bread?

- Wholemeal, wholewheat and wholegrain bread are basically different terms for the same thing and all are wholegrain and the best choice for your health
- Granary bread is slightly different and refers to bread that contains malted wheat flakes that are added to give it a characteristic texture. This may or may not be made from wholemeal flour, so you will need to check the label
- Wheat-germ bread is made from white flour to which a portion of wheat germ has been added back, it is not wholegrain

Wholegrains Cereals:

Barley

For those seeking high fibre, you don't get much better than barley. Often found as a flour, barley makes a closely textured bread with a slightly sweet flavour. Pearled barley has had the fibre removed so choose one with the husk still on.

Corn

Also known as maize, corn is a grain when dried and a vegetable when fresh. Often made into popcorn, cornbread and tortillas and as cornflour as a thickener. Avoid corn syrup as this is high in sugar. **Gluten free.**

Millet

An important staple food across Africa and India, millet is made from lots of different varieties of tiny grains. Commonly used in bread, certain types of porridge and beer, millet can be prepared to be creamy like mashed potato or fluffy like rice. **Gluten free.**

Oats

Known as 'rolled oats', flattened whole oat grains. This grain makes an ideal coating for fish and chicken, used as a crumble topping, for bread-making and, of course, as porridge. They are made into crackers known as oatcakes. Oats are very healthy as they are low GI. You can get gluten free versions.

Rice and Wild Rice

One of the better-known forms of grain, white rice has the germ and bran removed, while brown rice is left intact. Choose wholemeal Basmati rice as it has the lowest GI. Is made into crackers called rice cakes. **Gluten free.**

Rye

Rye bread is heavier in texture but is a really healthy choice as it is high fibre and low GI.

Wheat

Hard wheat is high in protein and contains strong gluten and is used to make bread. In the UK, soft wheat is more common and is used widely to make pasta (durum) and couscous. Spelt wheat is a grain that has been eaten for centuries in the UK and is nuttier. Spelt wheat is thought to be better for your gut.

How can I increase my intake of wholegrains?

The simplest way is to replace refined cereal foods, e.g. white bread and white rice with wholegrain bread and brown rice but the table below will help you:

| Type of Food | Wholegrain varieties | Portion Size = 1 serving | Ideas for use |
|---------------------|--|--|--|
| Breakfast cereal | Whole oats including rolled oats and oatmeal*; wholewheat cereals such as Weetabix, Shredded Wheat, bran flakes, puffed wholegrains, wholegrain muesli* | One tablespoon uncooked oats, three tablespoons of wholegrain cereal | With milk or yoghurt and fruit for breakfast. Avoid those with added sugar and salt |
| Bread and crackers | Wholemeal, granary, wheatgerm, wholegrain with multi-grain*, seeded*, mixed-grain*, soya* linseed*, rye (pumpernickel)*, pitta, wholewheat crackers, and rye crispbread* | One medium slice bread, ½ wholemeal tortilla, ½ wholemeal pitta, two rye crisp bread, two oatcakes | Use in place of white bread, cream crackers and sweet biscuits |
| Flour | Wholemeal, wheat germ, buckwheat, unrefined rye*, barley*, oatmeal* and oat flour* | n/a | In baking or recipes in place of white flour or mixed half and half , oats can be used as a topping for crumbles |
| Meals | Brown rice, wholewheat pasta*, whole barley*, bulgur (cracked) wheat*, quinoa*, and barley (not pearl), oatmeal* | Two to three heaped tbsp cooked brown rice, two to three tbsp wholegrain pasta | With casseroles, curries, sauces, in soups, and in salads. Oats/oatmeal - use as a breadcrumb. |

*Low GI varieties of wholegrains

Other grains to try:

Amaranth

With roughly 60 varieties in total, amaranth is not technically a grain but is of similar nutrition value and usage. These tiny seeds have a slightly peppery flavour and can be cooked in water, popped like corn or added to baked goods to increase protein content.

Buckwheat

Related to rhubarb, buckwheat is also not a grain as such, but is used in much the same way. It works well as a flour substitute for noodles, bread and pancakes. **Gluten free**

Quinoa

A valuable source of protein, quinoa which is a small seed not a grain, comes in a variety of different colours but it most commonly eaten in red, white and black forms. Use as an alternative to couscous and rice to accompany main meals or add to salad year-round.

Gluten free

Freekeh

Freekeh is harvested green wheat which is then roasted and rubbed. A firm, slightly chewy grain with a distinct earthy, nutty, smoky flavour.

Teff

Made into a spongy pancake-like bread in Africa, teff is a tiny grain and is never refined. It's extremely simple to cook and works especially well for baking. **Gluten free**

Triticale

This grain is made from a combination of wheat and rye. As a flour, it can be used to make biscuits, crisp breads, cakes and muffins or, as rolled oats, in breakfast cereals.

Sorghum

This grain can be used for making porridge, flatbreads and cakes. **Gluten free**

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