

## Dietary fibre

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### What is fibre?

Dietary fibre is the part of plant foods that cannot be digested by the body. There is no dietary fibre in animal foods. It is found in the skins, seeds and stalks of fruit and vegetables, legumes, pulses, nuts and the bran or husk of cereal grains.

### Types of fibre

There are two main types of fibre in foods: soluble and insoluble fibre. Resistant starch is a starch, which also acts like dietary fibre. It is important to have a variety of foods in your diet so as to have enough of both types of fibre.

**Soluble fibre** forms a 'gel' solution in the gut, which slows down digestion and absorption of food. It can also help to lower blood cholesterol and may assist in controlling blood glucose levels if you have diabetes.

Good sources include fruit, vegetables, legumes, oats and oat bran, barley, \*BARLEYmax and barley bran, rice bran, psyllium husks, nuts and seeds.

**Insoluble fibre** helps regulate bowel function by absorbing water in the gut, forming larger bulkier stools and thus assisting in preventing constipation.

Good sources include wheat bran, wheat based breakfast cereals, wholegrain breads and cereals, wholemeal pasta, brown rice, fruit and vegetables.

**Resistant starch** – about 10% of starch resists digestion in the small intestine, and reaches the large bowel where it acts like dietary fibre in improving bowel health. Here it stimulates the growth of 'good' bacteria, which keeps the cells of the bowel healthy and may help prevent bowel cancer. It may also assist in controlling blood glucose levels if you have diabetes. Good sources include breads (eg wholegrain breads, Wonder White); breakfast cereals (eg Kelloggs 'Guardian' and muesli); oats, lentils and other legumes, barley, \*BARLEYmax, rice, pasta, cracked wheat, cold cooked potato, green bananas, custard apples, peas and corn.

**\*NOTE:** BARLEYmax is a new natural 'supergrain' which contains twice the dietary fibre of regular grains, four times the resistance starch and has a low GI. This grain has been shown to enhance the health benefits of wholegrains. BARLEYmax can be found in products like breakfast cereals, e.g. Digestive 1<sup>st</sup> and Protein 1<sup>st</sup> (available at Coles and Woolworths supermarkets).

### Why is fibre so important?

Fibre is important for good health and is effective in treating and preventing the following disorders:

**Constipation** – Dietary fibre, in particular 'insoluble fibre' is effective in preventing and treating constipation. Insoluble fibre acts as a laxative by softening and 'bulking' the stools. Remember to drink adequate fluid (6-8 glasses / day) and exercise regularly for healthy bowel function.

**Diverticular disease** – Diverticulae are sacs or pouches, which occur at weak points in the digestive tract. They sometimes become inflamed, resulting in diverticulitis. The biggest cause of diverticular disease is a low fibre diet. An increase in fibre can usually assist with this condition. Consult your doctor or dietitian.

**Diabetes** – Most starches are digested to glucose in the small intestine. People with diabetes have better control over their blood glucose levels when these starches are digested slowly. Soluble fibre and wholegrains in food assist in slowing down the digestion of starch; therefore glucose is released slowly into the blood stream. This is important in the management of diabetes.



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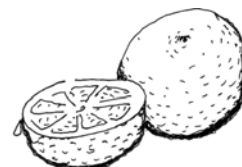
**Weight control** – Fibre can assist in weight management. A high fibre diet provides bulk and a feeling of fullness. Soluble fibre and wholegrains can slow down the digestion of your meal making you feel more satisfied and less likely to eat more.

**Cholesterol** – Soluble fibre has been shown to reduce blood cholesterol in particular (bad) cholesterol. Include foods containing soluble fibre daily (fruit, vegetables, legumes, rice, oat / barley bran, oats, barley, \*BARLEYmax).

**Colon cancer** - Regular consumption of wholegrains (2-4 serves) may reduce the risk of developing colon cancer, e.g. wholegrain bread, cereals and brown rice.

### How much fibre?

About 30 grams of dietary fibre is the recommended daily intake.



### Dietary fibre content of some foods

	Serve size	Fibre (grams)		Serve size	Fibre (grams)
<b>Bread</b>			<b>Nuts &amp; seeds*</b>		
Wholemeal	2 slices	4.0	Almonds*	25-30 nuts	2.5
Multigrain	2 slices	3.0	Peanuts*	30g	3.0
Wholemeal with grains	2 slices	6.0	<b>Vegetables</b>		
White high fibre	2 slices	2.4	Brussel sprouts	4-5 medium	4.5
White	2 slices	1.0	Broccoli	½ cup	1.5
Dark rye	1 slice	5.0	Carrot	½ cup	2.0
<b>Cereals</b>			Peas	¾ cup	5.0
Allbran	½ cup	9.5	Potato with skin	1 medium	3.5
Muesli	½ cup	6.0	Baked beans	1 cup	12.0
Weetbix, Vitabrits	2 biscuits	4.0	3-bean mix	1 cup	12.0
Rolled oats / porridge	1 cup cooked	3.4	<b>Fruit</b>		
White pasta	1 cup boiled	3.0	Apple with skin	1 medium	3.0
Wholemeal pasta	1 cup boiled	8.0	Banana	1 medium	3.0
White rice	1 cup boiled	1.0	Orange	1 medium	4.5
Brown rice	1 cup boiled	2.5	Sultanas	30g	2.0

\*Denotes high fat – limit if you are trying to lose weight  
 Figures from Allan Borushek's 'Calorie, Fat and Carbohydrate Counter' 2010.

### Other important facts

- > Cooked, frozen and canned fruits and vegetables are still valuable sources of fibre. Cooking foods containing fibre only softens the fibre.
- > Drink an adequate amount of fluid, preferably water, each day. Aim for 6-8 glasses a day
- > Gradually increase your fibre intake and distribute evenly over the day. Increasing fibre intake suddenly may lead to gastrointestinal discomfort. e.g. flatulence.
- > Include regular exercise and maintain a healthy weight.

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### Hints for increasing your fibre intake

**Baking** – use half wholemeal, half white flour or you can add  $\frac{1}{3}$  cup oat bran to one cup of white flour for cakes, muffins, biscuits and pastries. Add a little extra liquid. You can also include dried or fresh fruit and vegetables such as grated carrots when making cakes, muffins or scones.

**Add extra vegetables** – substitute some of the meat in stews or casseroles with cooked lentils, split peas, kidney beans or chickpeas, and add extra vegetables. When making spaghetti bolognaise substitute half of the lean mince with kidney beans or lentils. Include grated vegetables (e.g. carrot, zucchini) and cracked wheat in homemade rissoles or hamburger patties.

Base salads on beans, brown rice, wholemeal pasta, cracked wheat or barley mixed with vegetables. Eat the skin of fruit and vegetables where possible and leave skin on potatoes.

**Oats** – use rolled oats ('quick cook') to bind rissoles or meat loaf. Use processed oat bran or mashed beans as a thickener in soups or casseroles.

**Eat the whole fruit rather than drink the juice**, there is no fibre in fruit juice.

Aim for 2 serves of fruit (1 serve = 1 medium fruit) and 5 serves of vegetables a day (1 serve =  $\frac{1}{2}$  cup cooked vegetables, 1 cup salad vegetables).

**When reading the nutrition information panel on products aim for more than 5g/100g for fibre.**



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### For more information

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