

dietary fibre

clinical information for practitioners and patients

Dietary fibre is essential for health and can only be found in plant foods – animal foods such as meat, cheese and eggs have no fibre. Fibre is a carbohydrate that is largely undigestible and so does not contribute to the calorie intake of the diet. There are two major types - soluble and insoluble.

Soluble Fibre

Soluble fibre is often described as mucilaginous or slippery, since it has the capacity to carry lots of water thereby forming a gel. This can help lower LDL ('bad') cholesterol, while maintaining HDL ('good') cholesterol and help constipation or the symptoms of irritable bowel. Soluble fibre is found in fruit and vegetables, some cereals (e.g. oats, barley), psyllium, linseed, slippery elm and in legumes (dried peas, beans and lentils).

Insoluble Fibre

Insoluble fibre is often described as 'roughage'. This fibre is more resistant to digestion, and is fermented by bacteria to produce special fatty acids for the health of the gut wall. Insoluble fibre is found mainly in wholegrain foods (especially wheat bran and rice bran), the skins of fruits and vegetables, nuts and dried beans. It helps prevent constipation by producing bulky stools and speeding bowel transit time.

A combination of fibres is essential and can be achieved by including a variety of fruits, vegetables, grains and legumes in the diet.

Resistant Starch

Resistant starch is found in whole grains, cold cooked potatoes, lentils, firm bananas and as 'Hi Maize', which is added to bread and breakfast cereals. Resistant starch is fermented in the gut, resulting in beneficial effects on the bowel and blood cholesterol levels.

What are the benefits?

A high fibre diet helps prevent constipation, haemorrhoids and diverticular disease and may be protective against bowel polyps and cancer. A high fibre diet is also associated with a lower risk of heart disease, high blood pressure, gallbladder disease, obesity and diabetes.

Foods high in fibre tend to be low in fat and low in glycaemic index and so fit well into weight reduction, low fat and diabetic diets.

Fibre for young and old

Most Australians don't consume enough fibre at around 20g daily. The Australian Heart Foundation recommends adults consume approximately 30 - 35g daily.

Children should eat 10g of fibre a day plus an additional gram for every year of age. Eg. a 10 year old child should eat 15-20g of fibre per day.

A high fibre diet is important for the elderly due to a slowing of the digestive system with age.

Getting the most out of your fibre

If your current diet is low in fibre increase it slowly to help avoid abdominal discomfort or wind. A high fibre diet may not prevent or cure constipation unless you drink enough water every day – aim for at least 8 glasses a day. Regular exercise is also important if you suffer from constipation.

Large amounts (more than 2 Tbsp/day) of unprocessed bran are undesirable. They can bind essential minerals like iron, and also produce excessive abdominal flatulence, pain and loose bowel actions.

To reduce the gas when using dried beans, soak the beans for 18 hours to remove a large percentage of the oligosaccharides (these ferment in the colon to release gas). Throw away the soaking water and cook in fresh water. Always try to increase your fibre from food sources rather than from supplements since food contains other important nutrients. You may, however, need a supplement if you have particular needs. Please discuss this with your practitioner.

Ways to increase the fibre in your daily diet

- Add dried peas, beans and lentils to soups, casseroles, salads and as a side dish
- Switch to wholemeal or multigrain breads, brown rice and wholemeal flours over their white counterparts
- Eat baked beans on wholegrain toast for breakfast
- Replace all processed cereals with wholegrain cereals containing oats, linseed, barley, psyllium or nuts
- Eat raw nuts, seeds & fresh or dried fruit as a snack
- Snack on hummous and carrot sticks before dinner instead of Jatz and cheese
- Eat the fruit instead of the fruit juice (which has lost all its fibre)
- Aim for two-thirds of your plate to be covered by plant food, and meat or animal foods one-third
- Add an extra vegetable to every evening meal
- Check out the fibre content of foods with a nutritional panel to inform yourself of high fibre food options
- Avoid excessive intake of meat, animal products, fatty foods, fast foods and sugar as these are very low in fibre

dietary fibre

clinical information for practitioners and patients

| Food | Serve size | Fibre (g) | Food | Serve size | Fibre (g) | Food | Serve size | Fibre (g) |
|--|-------------|-----------|---|------------------|-----------|--|----------------|-----------|
| Grains | | | Fruits (in alphabetical order) | | | Legumes (in alphabetical order) | | |
| Barley (cooked) | 1 cup | 6.5 | Apple | 1 medium | 3.5 | Adzuki beans ck | 1 cup | 10.5 |
| Corn meal, whole | 1 cup | 4.5 | Apple, dried | 10 rings | 2.5 | Baked beans | 1 cup | 7.0 |
| Couscous | 1 cup | 2.0 | Apricots, canned | 6 halves | 2.5 | Borlotti beans (canned) | 100g | 6.5 |
| Pasta, white | 1 cup /100g | 2.0 | Apricot, fresh | 3 | 2.5 | Black eye beans ck | 1 cup | 6.5 |
| Plain cake/ muffin | 1 slice/60g | 1.0 | Apricots, dried | 5 | 5.0 | Butter beans | 70g | 2.0 |
| Rice, white | 1 cup | 1.0 | Avocado | 1 small | 1.0 | Cannellini beans (canned) | 1 cup | 16.0 |
| Rice, brown | 1 cup | 2.0 | Banana | 1 medium | 2.0 | Chickpeas ck | 1 cup | 8.0 |
| Spaghetti, w/meal | 1 cup | 6.0 | Berries, various | 1 cup | 3.0-8.0 | Dhal, ck | 1 cup | 8.5 |
| White flour | 1 cup | 5.0 | Dates, fresh | 2 | 1.5 | Green peas, ck | 1 cup | 2.8 |
| Wholemeal flour | 1 cup | 14.0 | Dried fruit & nut mix | 50g | 4.0 | Kidney beans, ck | 1 cup | 6.6 |
| Breads & Crackers (by increasing fibre content) | | | Figs, dried | 3 | 2.5 | Lentils, ck | 1 cup | 7.0 |
| Jatz | 1 biscuit | 0.1 | Figs, fresh | 1 | 1.5 | Lima beans ck | 1 cup | 8.5 |
| Salada, SAO, Water crackers | 1 biscuit | 0.3 | Fruit juice | 1 glass | <0.1 | Soy beans (canned) | 1 cup | 8.5 |
| Rice crackers | 10 | 0.4 | Fruit salad | 1 cup | 2.5 | Tofu | 250g | 3.0 |
| White bread | 1 slice | 0.6 | Grapefruit | 1 medium | 1.2 | Nuts & Seeds | | |
| Ryvita, Vitaweeet | 1 biscuit | 0.7 | Grapes | 1 cup | 1.4 | Almond spread | 1 Tbsp | 3.0 |
| Fruit loaf | 1 slice | 1.0 | Kiwi fruit | 1 | 2.5 | Almonds, with skin | 20 | 3.5 |
| Dark Rye | 1 slice | 1.4 | Mandarin | 1 | 1.5 | Brazil nuts | 6-8 | 2.1 |
| Mixed grain | 1 slice | 1.5 | Mango, fresh | 1 cup | 3.0 | Cashews | 1 Tbsp | 0.9 |
| Vita Wheat 9 grain | 1 biscuit | 1.5 | Watermelon/Rockmelon | 1-1.5 cups diced | 1.0 - 1.5 | Chestnuts | 10 roasted | 4.3 |
| Wholemeal bread | 1 slice | 2.4 | Papaya | 100g | 1.0 | Hazelnuts | 10 | 1.4 |
| Burgen Soy & Linseed bread | 1 slice | 2.2 | Passionfruit | 1 | 5.0 | Linseeds | 1 Tbsp /10g | 3.0 |
| Cereals (by increasing fibre content) | | | Peach | 1 medium | 2.0 | Macadamia nuts | 10 | 2.4 |
| Rice Bubbles & CocoPops | 1 cup | 0.3 | Peaches, canned | 1 cup | 3.2 | Mixed nuts | 2 Tbsp | 3.0 |
| Special K | 1 cup | 0.5 | Pear | 1 | 4.0 | Peanuts | 2 Tbsp | 2.4 |
| Corn Flakes | 1 cup | 1.0 | Pear, canned | 2 halves | 3.0 | Pecans | 20 halves | 2.7 |
| HoneySnacks, HoneyWeets | 1 cup | 1.7 | Pineapple, fresh | 1 cup | 2.2 | Pinenuts | 1 Tbsp | 1.0 |
| Ricebran | 1Tbsp/10g | 2.5 | Plum | 2 average | 4.5 | Walnuts | 14 halves | 1.9 |
| Kelloggs Komplete, Lowan | 1 cup | 2.6 | Prunes | 6 medium | 4.5 | Pepitas | 1/3 cup | 1.8 |
| Oatbran & Fruit, SportsPlus, FruityBix, NutriGrain | | | Sultanas, Raisins | 1/3 cup | 3.0 | Sesame seeds | 1Tbsp | 1.0 |
| Porridge cooked | 1 cup | 3.5 | Tomato, cherry | 6 | 1.5 | Sunflower seeds | 1/3 cup | 5.0 |
| Weetbix | 2 biscuits | 3.3 | Tomato | 1 medium | 1.0 | Spreads | | |
| Wheatgerm | 2Tbsp/18g | 3.5 | Tomato, canned | 1 cup | 1.1 | Baba ghannouj | 1 Tbsp | 2.5 |
| Rolled oats (raw) | 1 cup/55g | 4.0 | Vegetables (in alphabetical order) | | | Hummus | 2 Tbsp | 2.0 |
| SultanaBran, FibrePlus, Just Right | 1 serve | 4.5 | Artichoke, globe ck | 1 | 6.5 | Tahini paste | 1 Tbsp | 1.4 |
| Unprocessed bran | 2Tbsp/12g | 5.5 | Asparagus, fresh | 4 spears | 2.0 | Other | | |
| Kelloggs BranFlakes | 1 serve | 5.7 | Aubergine, grilled | 1 cup | 2.5 | Tabouli | 1 cup | 6.0 |
| Muesli, raw | 1 cup/60g | 6.0 | Beans, green, ck | 1 cup | 4.0 | Nutrimedecine Fibre BioComplex | 1 scoop (8.2g) | 6.3 |
| Oat bran | 1 cup/35g | 6.0 | Beetroot, ck | 1 cup | 1.7 | ck = cooked. Figures are averaged from US and Australian databases and are therefore approximate. Always check labels. | | |
| Vogels Soytana | 1 cup/45g | 7.2 | Broccoli, ck | 1 cup | 5.0 | | | |
| Vogels Vita Pro, Kelloggs AllBran | 1 cup/45g | 9.0 | Brussell sprouts, ck | 1 cup | 2.0 | | | |
| Processed wheat bran | 1 cup | 13.0 | Capsicum, raw | 1 cup | 2.5 | | | |
| Vogels UltraBran | 1 cup/45g | 14.0 | Carrots, raw | 1 cup | 3.0 | | | |
| | | | Carrots, ck | 1 cup | 5.0 | | | |
| | | | Cauliflower, ck | 1 cup | 3.4 | | | |
| | | | Celery | 1 stick | 1.0 | | | |
| | | | Fennel | half bulb | 3.0 | | | |
| | | | Mixed steamed vegetables | 1-2 cups | 5.0 | | | |
| | | | Mushrooms, fresh | 1 cup | 0.9 | | | |
| | | | Onion | 1 medium | 2.5 | | | |
| | | | Peas, green, ck | 1 cup | 5.0 | | | |
| | | | Potato, boiled, skin | 1 medium | 3.0 | | | |
| | | | Pumpkin, cooked | 1 cup | 2.7 | | | |
| | | | Pumpkin soup | 1 cup | 2.0 | | | |
| | | | Snowpeas | 1/3 cup | 2.0 | | | |
| | | | Spinach, cooked | 1 cup | 5.0 | | | |
| | | | Squash | 1 cup | 2.0 | | | |
| | | | Sweet corn, cob | 1 average | 5.0 | | | |
| | | | Sweet corn kernels, canned | 1 cup | 4.0 | | | |
| | | | Sweet potato | 1 cup | 5.0 | | | |
| | | | Vegetable juices | 1 cup | 1.0 | | | |
| | | | Zucchini, green | 1 medium | 1.5 | | | |