FANTASTIC FIBRE

LIFE EDUCATION
Learning with Harold

Fibre not only keeps our digestive system moving and healthy but also does good things for our cholesterol and blood sugar levels. Fantastic fibre can help with weight control, preventing diabetes, heart disease, and maybe even some cancers.

Summary

Fibre helps to keep our digestive system healthy and helps to keep us feeling fuller for longer. It is a type of carbohydrate that comes from plants. There are three main types: soluble fibre which keeps us feeling full; insoluble fibre which helps us to poo more easily; and resistant starch which encourages “good” bacteria, that can help us break down fibre, to grow in our large intestine.

Most of us aren’t getting enough fibre. But don’t go overboard: too much, especially in someone very young, can cause diarrhoea and make them feel full too quickly. If they feel full, they may not eat enough food to give their body all the nutrients they need to stay healthy.

What is it?

Fibre is a type of carbohydrate (like sugars and starches) and comes in three main types: soluble, insoluble, and resistant starch. It’s in the parts of plants that we can’t break down (digest) by ourselves to release energy (calories) – like cellulose cell walls, woody tissues, seed husks, gums and pectins.

What do the different types of fibre do?

Although food labels generally lump them all together as “dietary fibre”, each has a slightly different effect in our bodies. It’s good to make sure we are getting some of each type.

Soluble fibre dissolves in water in our body to become a gel-like substance that keeps us feeling full and slows down the emptying of our stomach. It also lowers cholesterol and blood sugar levels and supports the growth of helpful bacteria.

Insoluble fibre mostly keeps its shape and absorbs water as it passes through our gut, softening the bowel contents. Provided we’ve drunk enough water, this eases and speeds up movement of food through our gut. It helps prevent constipation (trouble pooing), helps us feel full, and keeps our gut healthy.

Resistant starch heads straight to the large intestine where it helps keep it healthy by promoting the growth of bacteria that partly breakdown fibre for us. (They are often called “good bacteria” in advertisements.)

Where do we get fibre from?

Fibre is only found naturally in plants. It may be added to processed or non-plant foods like yoghurts. Fruits, vegetables, grains, legumes, seeds and nuts are all great natural sources of fibre.

Soluble fibre is found in pectins and gums and in good amounts, in fruits (especially citrus, apples and blueberries), vegetables, oats, barley, and legumes. Beta glucan is one common type, found in wholegrains, oats, barley and some mushrooms.

Insoluble fibre comes from wholegrain breads, cereals, nuts, seeds, wheat bran, the skin of fruits, and vegetables like cauliflower, beans, carrots, potatoes.

Resistant starch comes from heating then cooling some foods like undercooked pasta, rice, or potatoes. Under-ripe bananas and legumes are other great sources.

How does soluble fibre affect the levels of substances outside the gut?

By slowing down the rate at which food passes from our stomach into the small intestine soluble fibre reduces how much glucose we absorb from it into our bloodstream. Soluble fibre also binds to bile acids in the gut stopping us reabsorbing some of the cholesterol they contain, which helps to keep cholesterol levels down, and in turn to reduce heart disease.

How does the fibre content of foods compare?

Food – and serve size	Fibre (g/100 g or 100 mL)	Fibre (g/ per serve)
Canned kidney beans in brine – 300 g tin	6.2	18.6
Tinned baked beans in tomato sauce – 300 g tin	5.5	16.5
Canned chickpeas in bine – 300 g serve	5.5	16.5
Wholegrain-style bread (Yarrows/Burgen) – 2 slices	11–12	10.8
Wheatmeal sandwich bread – 2 slices	6.5	4
White sandwich bread – 2 slices	3.6	2.4
One passionfruit, flesh and seeds	13.9	2.5
One raw apple – skin on	2	3.3
One banana – 19 to 20 cm	1.8	2.0
One raw apple –skin removed	1.4	2.1
Wholemeal pasta – 1 cup boiled spirals	5.9	6.5
White pasta – 1 cup boiled spirals	2.3	2.6
Brown rice – 1 cup boiled	1.8	3.7
White polished rice – 1 cup boiled	0.7	1.0
All Bran breakfast cereal – 1 cup	28.8	22.7
Rolled oats – 100 g cup (raw)	10-12	10-12
Weet-Bix – 2 bix	10.7	3.6
Source: The Concise New Zealand Food Tables, 12th edition 2016 (2017) and Food Composition Database.		

The Ministry of Health recommends 20 g to 24 g fibre per day as an adequate amount for 9- to 13- year-old girls and boys and about 25 g to 30 g for adult women and men. Manufacturers use a DI (daily intake) value of 30 g fibre to calculate %DI values.

Are we getting enough?

Most of us aren't getting enough fibre. The average daily dietary intake for NZ adults is only 20 g. Although children need less, most are probably still not getting enough. But don't go overboard: too much fibre, especially in someone very young, can cause diarrhoea, interfere with appetite and affect the absorption of other nutrients. Breakfast cereals with over 6g fibre/100 g, preferably over 10g, are great, but ones with over 15g probably have too much fibre for small tummies.

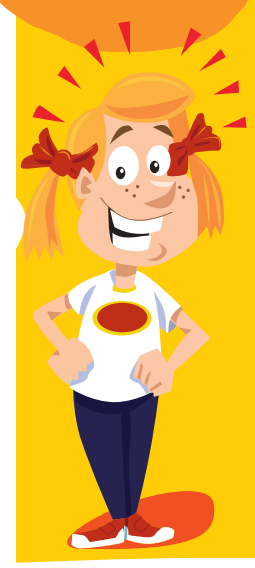
Why do only some nutrition information panels (NIPs) list "dietary fibre"?

Manufacturers don't have to list fibre on a NIP unless they've made a claim about its presence, level or health effects. There must be over 2g/serve for it to be listed. The NIP values are total values and don't distinguish between different types of fibre, unless the claim's about a certain type. "Functional" fibre (substances like inulin, psyllium, dextrins added to boost fibre levels in some yoghurts, drinks or breakfast cereals) is also combined with other fibres in the total count.

Why do only some nutrition information panels (NIPs) list "dietary fibre"?

- Try whole grain or wheatmeal breads, pastas and flours instead of white.
- Eat more seeds, nuts, fruit and veges - and keep their skins on.
- Add legumes or pulses like beans, lentils and chickpeas to stews, curries and salads.

It's best to increase fibre gradually, because the bacteria which ferment it in our gut release gases which can make us feel bloated (and need to escape!) until the body adapts. And we need to make sure we also increase the amount we drink to soften up all that fibre so it can do its job properly.



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