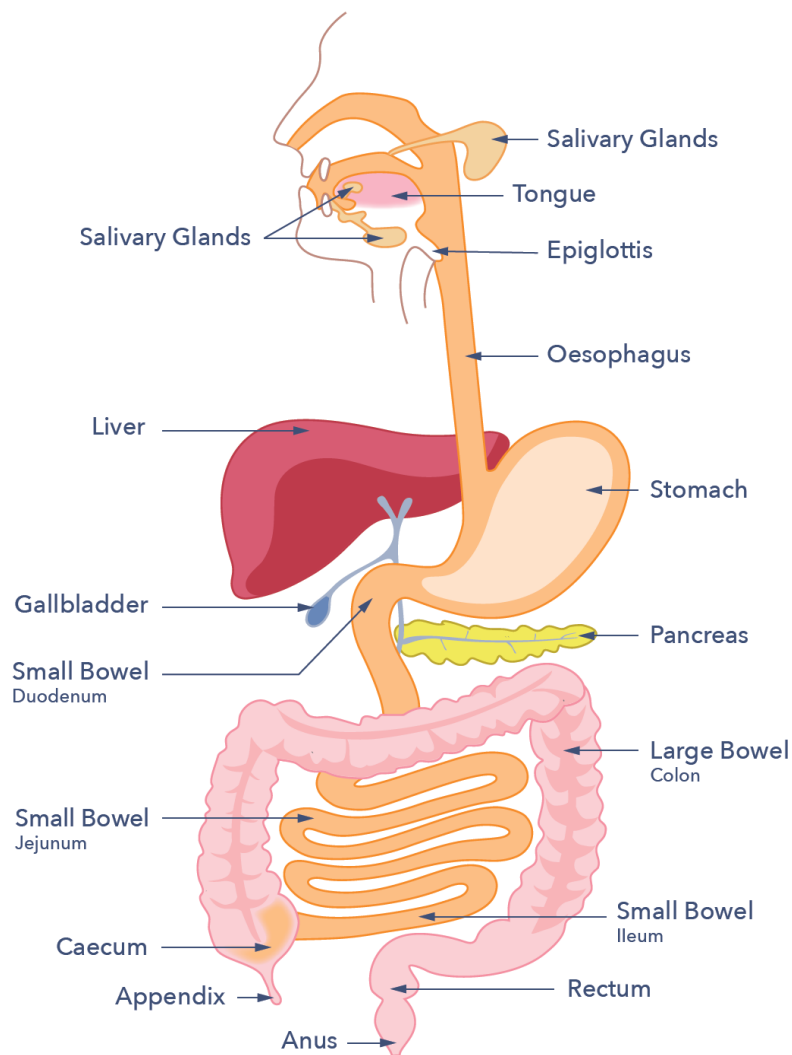




Fibre for Everyone

Guts UK is the charity for the digestive system. Funding research to fight diseases of the gut, liver and pancreas.

THE DIGESTIVE SYSTEM



Fibre: for everyone?

Have you been asked to change how much fibre you eat? Perhaps you were asked to eat more fibre to help with [constipation](#)? Or to cut some of it out if you are following a special diet for Irritable Bowel Syndrome ([IBS](#))? Or to eat it regularly but avoid it when you get symptoms if you have [diverticular disease](#)? Confused? probably!



Fibre is both simple and quite complicated. At a basic level you know that fibre is a part of some foods (fruits, vegetables, grains, beans, nuts, seeds) that you do not digest and therefore ends up in your large bowel. It can make your stool bigger and softer and sometimes also looser. It can produce gas. You might have heard that the bacteria in your gut can digest fibre and that generally this is a good thing. You might have also read somewhere that there are different types of fibre and the different types can have different effects on your gut. You probably know fibre can be given in pills or powder as a laxative. Fibre can also be used in food processing as gels or thickeners to make food look and feel smoother. The more we learn about fibre, the more complicated it looks.

Despite this apparent complexity the recommendations around fibre have not changed much over the years. Organisations serious and careful about the advice they give out have been saying for decades that we need to eat more fibre, obtained from a wide variety of foods, and preferably unprocessed. The [reason](#) for this recommendation is that people who consume more fibre are less prone to diseases of the heart and circulation, Type 2 diabetes and bowel cancer. They are leaner and tend to have lower blood pressure and total cholesterol. Moreover, people who eat more

fibre often have longer lives than those who have less fibre in their diet.

So fibre can contribute to a long and healthy life and most of us should increase the amount we eat. However people who suffer from digestive diseases sometimes have a tricky relationship with fibre. Some people limit foods high in fibre or avoid particular foods. Arguably you should only cut back on foods containing fibre if a certified health professional tells you to do so, and he or she ought to explain how, why and for how long you need to do this. In reality, however, many of us play around with our diet to try to manage our symptoms and help us feel better.

It is not always easy to do this. Unlike other nutrients the effect of fibre on our body can be remarkably quick. However it is not easy to control those changes. Part of the reason for this is that fibre actually comes in different shapes and sizes and the various types have different effects on the gut. Those different effects are particularly important for people with digestive disorders.

So what are these different effects, or functions, of fibre? Some fibre types absorb water from the large bowel making the stool bigger but also softer and easier to move along the gut. These types of fibre are sometimes referred to as soluble fibre. Some fibre types do not absorb water themselves but can actually stimulate the bowel to secrete more water, as well as secrete mucus, a smooth substance that also helps speed the stool along. These types of fibre are sometimes referred to as insoluble fibre. Oats, rye, barley, onions, leeks, root vegetables, apples and bananas contain soluble fibre while wholegrain bread and cereals, nuts and seeds, leafy vegetables, green beans and potatoes with their skin on are higher in insoluble fibre. Beans and pulses contain both types. Even though fibre is now known to be more complex than just being soluble or insoluble, it is useful to be aware of these terms as they are often used by health professionals and the general public.

However here lies one of the first distinctions in the function of fibre. Insoluble fibre can help with constipation though it is important to increase fibre intake slowly and drink plenty of water (this applies to all fibre types). The role of soluble fibre in constipation is more complex. Some types of soluble fibre might help with constipation but some other types will have little effect

and if consumed in excess could make matters worse. It is also important to note that soluble fibre can produce gas and this might cause discomfort and bloating in some people. On the other hand, soluble fibre can be useful if you have loose stools or [diarrhoea](#), as it absorbs water. Insoluble fibre, on the other hand, might worsen diarrhoea by making the bowel secrete more water. As you can see, it is not straightforward.

There are two added complications. One is that as most foods high in fibre tend to contain a mixture of types, manipulating the type (as opposed to just the total amount) of fibre in your diet can be challenging. The second complication is that you are not alone. Your large bowel is full of bacteria and they have a say in the matter. Most bacteria are fussy eaters and will consume only certain types of fibre. They struggle with insoluble fibre but they are keen on the more soluble types. When soluble fibres reach the bowel they soak up water, swell up and soften. Bacteria find this irresistible and start to digest the fibre rapidly. This has two effects. On one hand it means our stools lose some of the fibre that helps keep them soft, as it is eaten by our bacteria. The bacteria are also responsible for the gas that is sometimes produced in our guts. But our bacteria pay rent. After they digest our fibre they produce substances that are beneficial to our gut. These substances are very small fat molecules (called short-chain fatty acids) that serve as nourishment for the cells that line our bowel and can be turned into fat and sugar molecules by our liver. Bacteria also produce some vitamins. We feed our bacteria and in turn our bacteria feed us.

Interestingly it seems gut bacteria do more than just produce nutrients. What exactly our gut bacteria get up to is an exciting area of research because it looks like their impact might extend beyond the gut. There is also a lot of interest in finding out which types of fibre encourage the growth of a more beneficial bacterial population in our gut and limit the growth of less helpful sorts. These fibres are called 'prebiotic' fibres because they encourage the growth of bacteria with potential health benefits, or 'probiotic' bacteria. To learn more about our gut bacteria read the Guts UK leaflet [The role of gut bacteria in health and disease](#).

Prebiotic fibres are beneficial to our bacteria friends and might be helpful to our health in ways that are yet to be understood.

However an excess of prebiotic fibre in our diet (as indeed an excess of any type of fibre) could be problematic. Prebiotic fibres are soluble and are digested by bacteria: this reduces the ability of our stools to hold water, making them harder to pass. Indeed an excess of prebiotic fibres has been link to constipation. Moreover, people who suffer Irritable Bowel Syndrome (IBS) might be particularly sensitive to some prebiotic fibre types. A treatment for IBS known as the [Low FODMAP Diet](#) temporarily removes foods high in prebiotic fibre from the diet (as well as other food components) and then reintroduces them one by one to find out which ones are tolerated by the IBS patient and which ones need to be removed from the diet long-term. The Low FODMAP Diet is also being tested for other gut conditions, such as Inflammatory Bowel Disease.

Another common gut condition where the amount, and possibly the type, of fibre might be important is diverticular disease. Traditionally the cause of diverticular disease was seen as a low fibre diet. This assumption has been challenged recently but for those who already have diverticular disease a high fibre diet has been shown to reduce the number of complications linked to this condition, such as infection or bowel perforations. People with diverticular disease can have constipation or diarrhoea, and sometimes have both in turns. During a bout of diarrhoea the advice is to cut back all fibre until symptoms improve, at which point it can be reintroduced carefully. People with constipation can sometimes feel bloated, which could worsen if too much soluble fibre is consumed. There might be some scope for trying foods high in different types of fibre to improve each symptom, if possible in consultation with an informed health professional. Unfortunately there isn't an easy rule book to consult in this area and a bit of trial and error is often needed to come up with the best diet for each situation.

Dietary fibre is essential for good health and can also help manage symptoms in some digestive disorders. Knowing which foods to eat to manipulate the amount and type of fibre in our diets can be complex but it is worth a bit of trial and error to explore what our guts and digestive conditions tolerate. The [British Dietetic Association](#) and the [British Nutrition Foundation](#) websites have information the fibre content of common foods.

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