

Food Fact Sheet: Probiotics

What are probiotics?

Although people tend to think that bacteria are harmful germs that spoil food or make you ill, there are many bacteria that are good for our health. The gut is the organ of the body where food is digested and absorbed and it naturally contains trillions of bacteria that are important for helping us stay healthy. Probiotics are 'good' bacteria found in food products or supplements that can beneficially affect our health by improving the balance and function of the gut bacteria. They are found in many different forms such as yoghurts, tablets, capsules and sachets.

Probiotics are generally considered safe for healthy people of all ages. However, people whose immune system does not function properly may be at risk when taking a probiotic and should seek specific advice from a doctor or dietitian.

How do probiotics work?

Many probiotics have been shown to restore the balance of the gut bacteria which can help our body work at its best.

When we eat or drink probiotics they compete for space and for food with potentially harmful bacteria – evicting them from our gut. Probiotics also stimulate our own immune system to help it to fight infections better. For example, some studies have shown that they can make colds last for shorter lengths of time and improve your response to vaccines!

Probiotics can also help us to digest fibre from our diet. When they do this, probiotics produce acid compounds that keep the lining of our gut healthy.

Did you know?

The number of bacteria in your gut is almost ten times more than the number of your own body cells. If you gathered all of your gut bacteria together, they would weigh approximately 1kg (over 2lb).

The bacteria in the gut can be knocked out of balance for many different reasons, including: getting older, taking antibiotics, illnesses such as irritable bowel syndrome or inflammatory bowel disease or following an episode of food poisoning (gastroenteritis) or gut surgery.

What can probiotics be used for?

A lot of research has been done to find out if taking probiotics is good for healthy people and people with specific disorders. The scientific evidence for their use keeps growing, but here are a few areas where probiotics may be beneficial:

Taking a course of antibiotics

Antibiotics are really useful at fighting off bacterial infections, however, they also cause major changes to the balance of our gut bacteria, which sometimes results in us getting diarrhoea. Lots of research shows that many probiotics will help protect people from getting diarrhoea when they take antibiotics. Probiotics must be taken as soon as you start the antibiotics and continue for at least one week after the end of the course.

Preventing the Clostridium difficile superbug

Some people, particularly those taking antibiotics, are at risk of catching the gut superbug Clostridium difficile (sometimes called "C-diff"). This bug causes very bad diarrhoea, and although it can be treated with antibiotics, up to four in ten people will get C-diff again. Dietitians and other clinical researchers have found that a probiotic milk drink containing Lactobacillus casei and Lactobacillus bulgaricus may prevent older people who are taking antibiotics in hospital from getting C-diff in the first place.

Travelling overseas

Travellers' diarrhoea can occur due to a bacterial or viral infection during or following a trip to specific countries. The symptoms are passing watery stools three or more times a day, either during or shortly after travelling. It usually lasts for around three to five days and is a common but usually mild illness that is spread through poor hygiene. A review of 12 different studies has shown that overall probiotics can reduce the chance of you getting travellers' diarrhoea. If you are going to a part of the world where travellers' diarrhoea is common then you might consider taking the probiotic *Saccharomyces boulardii* or a mixture of probiotics called *Lactobacillus acidophilus* and *Bifidobacterium bifidum* for the entire holiday.

Constipation

Constipation is common in the UK and its symptoms include infrequent bowel movements, hard stools, a bloated stomach and straining. Recent studies have shown that probiotics may help to ease the symptoms of constipation. If you suffer from constipation, try products that contain *Bifidobacterium lactis* for a trial period of four weeks. If they don't work, try another brand or stop taking them.

Irritable bowel syndrome (IBS)

Approximately one in ten adults in the UK have IBS and symptoms include severe diarrhoea or constipation, together with abdominal pain. Some patients with IBS have been shown to have changes in the balance and function of their gut bacteria. Although many of the studies so far have been small and inconclusive, in general researchers have shown that certain probiotics may help to reduce symptoms of IBS, particularly bloating. Dietitians recommend that patients with IBS take probiotics for a trial period of four weeks and if they don't work to try another brand or stop them – they won't work for everybody.

Inflammatory bowel disease

Ulcerative colitis and Crohn's disease are both inflammatory bowel diseases that result in severe diarrhoea and major changes to the balance of the gut bacteria. Some probiotics have been shown to be very useful for patients with ulcerative colitis, particularly for helping them to stay well for longer. However, their use for patients with Crohn's disease is not as conclusive.

Prebiotics

Some probiotics find it difficult to reach the gut because they are killed by acid in the stomach. One way of boosting your own natural good gut bacteria is through eating prebiotics. Prebiotics are types of carbohydrate that only our gut bacteria can feed upon. Eating prebiotics therefore causes more good gut bacteria to grow in your gut.

You can get prebiotics by eating onions, garlic, asparagus, artichoke, chicory and banana. However, in the UK we don't eat large quantities of these foods and so some people choose to take a prebiotic supplement such as fructo-oligosaccharide. Although some research studies have been done on the use of prebiotics in the areas covered above, in general, more studies have been done on probiotics. More research is required in these areas for the use of prebiotics.

Did you know?

Not all probiotics work the same way! Research has shown that different probiotic bacteria have different effects in health and disease, which means not all probiotics will help with all symptoms or conditions.

Ask your doctor or dietitian for information on the best probiotic to use for your symptoms.

Summary

There are lots of natural bacteria in our gut which help us stay healthy but these can sometimes be knocked out of balance.

Probiotics are good bacteria which can improve the balance of our gut bacteria and can be found in food products such as fermented milk drinks, some yoghurts and supplements.

Probiotics are generally safe for healthy people to take. However people whose immune systems do not work properly may be at risk so they should seek professional advice beforehand.