

**Probiotics and Prebiotics fact sheet**  
**For publication under licence agreement TFA 01044**

Prepared for Burson Marsteller  
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## **W**hat are Gut bacteria?

You might think of all bacteria as being harmful: - like germs, which spoil food or make you unwell. But some bacteria can offer specific benefits.

Your gut contains millions (so many, it's estimated they weigh around 1 kg or 2.2 lb) of bacteria that are important for keeping you healthy. Of course there are harmful bacteria too and it's important to be able to tell the differences between them. Bacteria are classified by their species and their strain and they usually have a Latin name.

Imagine that all dogs are the same species but different breeds have different characteristics- it's similar for bacteria- they are all the same species but different strains (breeds) have different characteristics- some bacteria are harmful and some offer benefits to health.

Most of the time all the different strains of bacteria can live in the gut together without a problem but sometimes an imbalance occurs if you're under stress; you need to take antibiotics or if you suffer with conditions like irritable bowel syndrome or ulcerative colitis. These are cases where Probiotics can offer some help.

## **W**hat are Probiotics?

The World Health Organisation's official definition of a probiotic is "live microorganisms which when administered in adequate amounts confer a health benefit on the host" (1)

Put simply, probiotics are good or friendly bacteria found in food products or supplements which can benefit your health by improving the overall balance of the bacteria living in your gut.

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## **W**here are probiotics found?

Our understanding of probiotics has existed for over 100 years but scientists are only just starting to really understand their role in maintaining health, by boosting the immune system and managing disease. As a result there are hundreds of different probiotic products available and it can seem a bit confusing and over whelming to know which to choose.

The most common foods probiotics are found in fermented milk drinks and yoghurts, but they're also available in tablets, capsules and powders as nutritional supplements.

There have been reports in the news of some probiotic products not containing the bacteria they claim on the label. Others have been found to contain too few bacteria to offer any benefit at all, while in other products the bacteria are destroyed by the digestive process so they are inactive and offer no benefit by the time they reach the small intestine.

## **A**sk yourself these questions to help choose a good quality probiotic:

**Does the product tell you which strain of probiotic is in it?** If not you can't decide if it will do the job you want it to. Remember different bacteria do different jobs.

**Does it tell you how many probiotics are in the product?** This may be shown on the label as CFU (Colony Forming Units). It's how probiotics are counted. If it's on the label it's more likely that the manufacturer has made sure there are enough to give you a benefit.

**Does it tell you how much to eat or how many supplements to take?** A serving suggestion suggests that the manufacturer knows how many probiotics are in their product and how much you need to consume to receive any potential benefit

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**Storage guidance and manufacturer contact details are all important indicators of responsible probiotic manufacturers too.**

**Y**ou might benefit from taking a probiotic if?

**You're taking antibiotics**

Although they're great for helping the body fight off bacterial infections, antibiotics can cause major changes to your gut bacteria which can result in you getting diarrhoea. There are a good number of studies showing that taking probiotics will help protect you from antibiotic associated diarrhoea (2).

The probiotics should be taken as soon you start the antibiotic treatment and for at least one week after the end of your course of treatment.

**You're going travelling**

Infectious diarrhoea is caused by bacterial or viral infection and often seen in travellers to exotic, developing destinations. Infectious diarrhoea is common and can be very dangerous in young children, which is where a lot of the research in this area has been focussed. This has shown that the duration of diarrhoea can be reduced which in turn can prevent children from becoming dehydrated (3).

Because the majority of research in this area has looked at children you shouldn't assume the same benefits will automatically be seen in adults. More research is needed before you can make the same conclusions.

There is mixed evidence for probiotics reducing the chances of getting travellers diarrhoea but if you wanted to take probiotics to reduce your chance of becoming unwell whilst travelling it would seem sensible to start before travelling and continue throughout your trip. (4)

**You get lots of colds**

Although only a mild illness the common cold is exactly that - very common and can be miserable and mean time off work or school.

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A small number of probiotic strains have been studied to measure their effect on the common cold and some have shown promising results. (5)

It appears that probiotics are unlikely to prevent you from getting a cold but can speed up the recovery and reduce the severity of symptoms - which is still a big benefit if you're the one with the sniffles. This suggests that probiotics targeting the immune defences appear to offer some benefit.

**You suffer from Irritable Bowel Syndrome (IBS)**

IBS is a chronic condition affecting many people and can be very difficult to treat. Symptoms include intermittent pain, diarrhoea and / or constipation, and are often accompanied by bloating, flatulence and urgency when needing the toilet. If you suffer with IBS life can be utterly miserable.

Although not fully understood, it is thought that that one of the many causes of IBS may be linked to bacterial overgrowth in the small intestine. Current evidence from a wide number of studies is promising for the use of probiotics in IBS, particularly if you suffer with bloating, abdominal pain and altered bowel habits (6).

Just a word of caution though, IBS studies are plagued with a notoriously high placebo effect and more, large scale studies will help to clarify the true extent of any benefits probiotics offer.

**You suffer from Inflammatory Bowel Disease (IBD)**

Ulcerative colitis and Crohn's disease are both forms of IBD. Both conditions can require surgery to treat their can involve a large range of unpleasant complications.

Probiotic drug treatments have been shown to be very useful for some Ulcerative colitis patients (8). The evidence to support the use of probiotics for Crohn's disease sufferers is less convincing though.

Further studies are needed to see what the full potential effect for IBD sufferers from probiotic foods and supplements might be (7).

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## **W**hat are prebiotics?

Pre biotics are not bacteria at all- they are a type of carbohydrate that you don't digest but that your gut bacteria feeds on. Some prebiotics have been shown to provide health benefits by complementing and supporting the benefits offered by probiotic bacteria and simply causing more good bacteria to grow in the gut.

## **W**here are prebiotics found?

Dietary sources of prebiotics include onions, garlic, artichokes, asparagus, almonds and chicory.

However, in the UK we don't tend to eat the sort of quantities of these foods needed to provide the 5-8 grams of prebiotic that scientist suggest we need to receive any real benefit. You might consider taking a prebiotic supplement or eating foods which have prebiotics added to them like cereals, breads, biscuits, milk desserts, cereal bars, spreads and even ice creams.

When prebiotics have been added to foods they tend to be shown on the ingredients list using their chemical name. Look out for the following names on labels to tell you if they contain added prebiotics:

**FOS- fructooligosaccharides**

**Inulin- a type of FOS**

**GOS- glactooligosaccharides**

Prebiotics have been less well researched than probiotics, and while interest in their uses is mounting there simply isn't sufficient evidence to make any firm recommendations for their routine use.

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