



## Healthy living > What are probiotics?



# What are probiotics?

Peer reviewed by **Dr Krishna Vakharia, MRCGP**

Authored by **Amberley Davis**

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A healthy gut supports your immune system, protects against illness, and helps with the daily functioning of your body. Probiotics are the good bacteria that can help keep your gut healthy, but what exactly do they do? Are there really benefits to consuming probiotic foods and dietary supplements?

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## What are probiotics?

**Probiotics** are live bacteria and yeasts found in your digestive system. The word probiotics is also used to describe foods or supplements which contain large amounts of these tiny living organisms.

Some popular probiotic health products often refer to these as the friendly bacteria or good bacteria. To scientists, these bacteria are known as microbes.

## What do probiotics do?

Probiotics help to keep your gut healthy. The gut refers to your entire digestive system, from mouth to anus, also known as your digestive tract.

In your gut, you have thousands of different types of bacteria and other microorganisms. Scientists call this your gut microbiome. Probiotics are the bacteria that support important bodily functions and your overall health.

Every person has gut bacteria that can cause you harm if there are too many in comparison to probiotics. This imbalance is called gut dysbiosis, and it can be brought on by infectious disease, long-term use of bacteria-destroying medicines like **antibiotics**, or by following certain diets<sup>1</sup>.

If this happens, you can increase the levels of probiotics in your gut by consuming probiotic foods or supplements. Your gut microbiome plays a key role in your immune system and many daily operations of the human body, and so evidence suggests that addressing an imbalance of bad and good bacteria may help protect against several diseases and health problems.

## What are the benefits of taking probiotics?

There is little evidence that taking probiotics through food or dietary supplements can benefit healthy people. Research even suggests that many people's gut microbiomes don't change when they consume probiotics, and that most actually pass right out of the body<sup>2</sup>.

Yet, if you have a problem linked to your digestive health, probiotics may be worth trying.

There's evidence that taking probiotics may help:

Relieve the symptoms of irritable bowel syndrome (IBS) – and certain probiotic strains **may be better for this than others**.

Reduce occurrences of regular **diarrhoea, constipation, bloating and wind**<sup>3</sup>.

Improve **lactose intolerance** symptoms<sup>4</sup>.

Manage blood sugar levels in people with **type 2 diabetes**<sup>5</sup>.

Probiotics may also be beneficial for:

**Pregnancy** - evidence suggests they may **help protect against pregnancy complications, support your maternal health, and reduce the risk of your baby developing certain conditions.**

**Babies** - As 70% of the immune system is in the gut, probiotics may **aid the development of your baby's immune system and help with certain health conditions like asthma, infant colic, and food allergies.**

**People who take a prolonged course of bacteria-destroying medications** - such as antibiotics.

## How to use probiotics safely

### Probiotic fermented foods

Whether you have a specific gut-related health concern or not, eating probiotic foods is not only safe but good for your general health. For example, the fermented dairy drink kefir may also be useful in preventing and treating cancer - however it should not be used instead of traditional medicines for treating cancer - with research in this area ongoing<sup>6</sup>. We explore the **five best probiotic foods here.**

### Patient picks for Healthy eating



## Whole grain heroes: Why eat ancient grains?

### Probiotic dietary supplements

There are also plenty of probiotic supplements. You can get these as oral tablets, liquids, or sachets. Provided that you follow the instructions for the recommended dosage, these are safe for everyone to use, although **if you're pregnant** you should speak to your pregnancy healthcare advisor first. There's currently no evidence that probiotics are unsafe in the long term, although we need more research on the effects of extended use.

If you have a gut-related problem, your doctor or dietitian may recommend a specific probiotic supplement. However, these products are also widely available online and in pharmacies. If shopping around yourself, make sure you choose a quality product:

#### Buying a quality supplement

**Probiotic strains** – if taking for a specific health problem, check if the probiotic strain has been specifically studied for that issue. **Find the best probiotic for IBS here.**

**Colony-forming units (CFU)** – check if the label details the CFU count. This is the amount of live friendly bacteria the product contains. A quality product will contain at least 1 billion CFU per dose<sup>7</sup>.

**Randomised controlled trials** – you can check the product manufacturer website or contact them to find out the research they have done. The most reliable studies are:

Placebo-controlled – participants are randomly assigned to receive either a real or fake probiotic.

Double-blind – neither the scientist nor the participant knows if they are taking the real or fake probiotic.

**Third-party testing** – check if the supplement that has had third-party testing by an independent laboratory.

### Further reading

1. Harvard T.H. Chan: The microbiome.
2. Zmora et al: Personalized gut mucosal colonization resistance to empiric probiotics is associated with unique host and microbiome features.
3. Hungin et al: Systematic review: probiotics in the management of lower gastrointestinal symptoms – an updated evidence-based international consensus.
4. Oak and Jha: The effects of probiotics in lactose intolerance: a systematic review.
5. Rittiphairoj et al: Probiotics contribute to glycemic control in patients with type 2 diabetes mellitus: a systematic review and meta-analysis.
6. Sharifi et al: Kefir: a powerful probiotics with anticancer properties.
7. National Institutes of Health: Probiotics.

## Article history

The information on this page is peer reviewed by qualified clinicians.

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Authored by:

**Amberley Davis**

Peer reviewed by

**Dr Krishna Vakharia, MRCGP**

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