

# Antibiotic support

## What are probiotics

Probiotics are live bacteria and yeasts that are often called the “good” microorganisms. They benefit the body, specifically the digestive system, by helping digest food, destroying disease-causing microorganisms, and producing vitamins. There are trillions of these microscopic organisms in your digestive system, especially the last part of the gut, the large intestine (colon). They rely on what we eat and drink to grow and to increase in number.

### Where do you find probiotics?

Products sold as probiotics include foods, dietary supplements, and products that aren't used orally, such as skin creams. Live cultures of probiotics are also sometimes added to foods such as probiotic yoghurt or fermented milk drinks such as Yakult, or are naturally present in fermented foods like kombucha, kefir and kimchi.

Capsules, powders and sprays containing beneficial bacteria or probiotics can be bought from pharmacies, health shops and supermarkets. The bacteria are usually freeze-dried (but remain alive); when you take the supplement, they warm up in your digestive system and become fully active.

The body does not need the addition of these foods or supplements that contain probiotics, to be healthy. However, when taken in the right amount, these probiotics assist the job of the “good” bacteria that are already present in your gut and improve your health.

## Types of probiotics

Many types of bacteria and fungi are classified as probiotics. They all have different benefits, but most come from three groups.

- ***Lactobacillus***. This may be the most common probiotic. It's the one you'll find in yogurt and other fermented foods. Different strains can help with diarrhoea and may help people who can't digest lactose, the sugar in milk.
- ***Bifidobacterium***. *Bifidobacteria* are bacteria found in your intestines, and they are important for your health. One of the main functions is to digest fibre and other complex carbohydrates your body can't digest on its own.
- ***Saccharomyces boulardii***. This is a fungus extracted from lychee fruits that's incorporated into capsules or added to probiotic mixes. This can be beneficial for addressing diarrhoea and delivering anti-inflammatory, antimicrobial and antitoxin effects. An additional benefit of *Saccharomyces*

*boulardii* is that it isn't susceptible to destruction from antibiotics and can therefore be taken at the same time as your course of antibiotics.

### Not all probiotics are the same

There are a number of different probiotic dietary supplements on the market, each having different species and strains of bacteria and yeasts.

In terms of effectiveness, keep in mind that unlike medicines, dietary supplements don't need to be approved by Medsafe (the Ministry of Health organisation who ensure the safety of medicines in New Zealand). This means that manufacturers can sell supplements simply with 'claims' of safety and effectiveness. In international studies that have examined different probiotics, they have found that:

- Products were often mislabelled and did not contain the strain of bacteria they were said to contain, or contained potentially harmful bacteria.
- Quantities of live bacteria and yeasts were so low in some products that they could not have any effect.

Different probiotics may be useful for different conditions, some probiotics also contain vitamins which provide added health benefits. Check with your pharmacist which product they recommend or read the label to make sure you've chosen the right probiotic for your needs.

## What do probiotics do?

We are only beginning to understand how probiotics promote health. When the gut becomes unbalanced with unhealthy levels of certain bacteria, probiotics can help restore the balance. They've been shown to secrete protective substances, which may turn on the immune system and prevent pathogens from taking hold and creating major disease.

### Keeping your gastrointestinal tract healthy

When the digestive tract is healthy, it filters out and eliminates things that can damage it, such as harmful bacteria, toxins, chemicals, and other waste products. The healthy balance of bacteria assists with the regulation of gastrointestinal motility and maintenance of gut barrier function. The majority of the health benefits attributed to probiotics are thought to occur in your gastrointestinal tract. These may include:

- improved digestion and nutrient absorption,
- enhanced immune function and

- re-colonisation of the gastrointestinal tract following a disturbance in gut bacteria, as can occur after treatment with antibiotics.

There is good scientific evidence that taking a course of probiotics can help prevent side effects associated with antibiotics. When you take a course of antibiotics, they can disturb the natural balance of “good” and “bad” bacteria in the intestinal tract causing harmful bacteria to multiply beyond their normal numbers. This causes symptoms such as diarrhoea and crampy abdominal pain.

### Supporting your immune system

Researchers are still trying to figure out which probiotics are best for certain health problems, there is some evidence that they’re useful for boosting our immune system. Our immune system is our protection against germs. When it doesn’t function properly, we can suffer from many different conditions. Some people say taking regular probiotics supplements have helped with:

- Skin conditions, like eczema
- Autoimmune disorders, e.g. ulcerative colitis, Crohn’s disease, and rheumatoid arthritis
- Urinary and vaginal health e.g. managing vaginal thrush and preventing urinary tract infections
- Preventing allergies and colds
- Oral health.

### How much probiotic should I take?

Although probiotics appear to be generally well tolerated and safe in otherwise healthy individuals, there are no formal clinical trials assessing probiotic safety or optimal dosing. Dosages vary by product, so no general dosing recommendation can be made.

The concentration of bacteria in a probiotic is generally reported in colony forming units (CFU). As an example, adults who are taking antibiotics are reported to need to ingest between 5 and 40 billion CFU/day of a probiotic organism in order to experience any benefit.

The concentration of yeasts is generally reported in milligrams (mg). It is recommended that adults take between 1000-2000mg per day.

### What about in children?

Antibiotics are frequently prescribed in children and as with adults, antibiotics alter the microbial balance within the gastrointestinal tract, commonly resulting in antibiotic-associated diarrhoea. Probiotics help prevent diarrhoea by replacing the body’s “good” bacteria that have been lost, and are safe to use in children. Many supplement brands make

children friendly of probiotics, often in a chewable form such as “gummies”.

### Caution – who should not use probiotic supplements?

- If you are generally healthy, probiotics have a good safety record. Side effects, if they occur at all, usually consist only of mild digestive symptoms such as gas or nausea. However, people whose immune systems do not work properly or those who are seriously ill may be at risk, so they should seek professional advice beforehand.
- If you’re pregnant or breastfeeding, it’s especially important to consult your doctor or pharmacist before starting using probiotics.

Remember to tell all your health care providers about any complementary or integrative health approaches you use, such as probiotics.

### Ways to increase ‘good’ bacteria in your gut

There are a number of ways that you can support the work of probiotics in your digestive system, including:

- **Eating high-fibre foods:** These beneficial bacteria can break down fibre. Therefore, foods rich in fibre, such as apples, blueberries, almonds and pistachios, can all help your good bacteria to thrive
- **Eating polyphenols:** Polyphenols are plant compounds that can be broken down by gut bacteria. Polyphenols from foods such as cocoa, green tea and red wine all increase your good bacteria in the gut
- **Eating whole grains:** Whole grains such as oats and barley are very good for gut health and can help increase intestinal *Bifidobacteria*
- **Exercise:** Some studies suggest that exercise may increase good gut bacteria.

### Problems when taking a probiotic?

If you experience unexpected side effects such as an allergic reaction, rash or shortness of breath when taking your probiotic, then tell your doctor immediately or ring **HealthLine 0800 611 116**.

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