

# Probiotics

There are more bacteria in your gut than cells in your body – some are beneficial and some are potentially harmful. The beneficial bacteria produce some vitamins such as vitamin K and B vitamins, produce antibiotic-like substances and also act as a vital part of your immune system (some say a second immune system). The harmful ones include bacteria and fungi. In the past we obtained many beneficial bacteria from small amounts of soil and residue found in our food. These beneficial and harmful species are normally in a state of balance but the harmful ones can get out of control. This can happen after taking certain drugs, such as steroids or antibiotics or from taking a diet high in sugar or alcohol.

In these situations and in many gut disorders it can be useful to take some probiotics. This is like taking an extra helping of good bacteria. **These probiotics can be found in many yoghurts such as Actimel and Yakult.** However these yoghurts also tend to be very high in sugar so are not ideal for long term use. Good bacteria can also be found in fermented foods such as sauerkraut.

Supplements of probiotics are also widely available. The bacteria most commonly used in these are lactobacilli and bifidobacteria. One of the problems with these supplements is that surveys have shown that they do not always have the bacteria listed on the label or do not have them at the right strength.

The most important healthy bacterium is bacteroides. Unfortunately it is anaerobic and therefore does not survive in supplements, which may be the reason bacteria in probiotics do not colonise the intestine.

An ideal supplement should have more than one species in them. Supplements can be capsules, tablets or powder. A combination of lactobacilli, bifidobacteria and soil bacteria such as bacillus subtilis work well. **A good probiotic should contain at least 8 billion cells per gram.** As good bacteria can kill harmful bacteria and release toxins, probiotics can sometimes initially cause “die-off” symptoms such as tiredness or rash. If this happens then stay on a low dose and increase the dose when these “die-off” symptoms disappear and then build up to a therapeutic dose. In a chronic condition it will take at least 6 months to re-establish normal gut flora and then the dose can be reduced. During this time reducing sugar and refined carbohydrates like white flour products, which feed the harmful bacteria, is important. One way to test if the probiotics are active and contain enough bacteria is to take several and

see if this produce wind and bloating –this will only occur if there are enough bacteria in them.)

**The therapeutic dose for an adult should be 15-20 billion bacterial cells daily.**

For 12-16 years old use 12-15 billion daily.

For 4-10 years old take 8-12 billion daily.

For 2-4 years old 4-8 billion daily.

For 1-2 years old 2-4 billion daily.

For under 12 months 1-2 billion daily.

Probiotics are normally taken with food but **don't take them with a hot drink** as this can kill the bacteria inside them. Also it is best to filter water as **chlorinated water can kill the bacteria** (that's why it's put in the water)

Probiotics are widely available at health food shops but check the concentration of bacteria in the products.

However you need to encourage these good bacteria to grow and thrive. The best way to do this is to eat food with insoluble fibre from vegetables. These remain partially digested and remain in the colon acting as food for beneficial bacteria. Fermented foods such as sauerkraut and kefir also help.