

# Probiotics

## What are probiotics?

Probiotics are live microorganisms (in most cases, bacteria) that have been shown to have a health benefit. They have been studied for a variety of conditions. There is good evidence that probiotics help in the treatment of most causes of diarrhea as well as the prevention of antibiotic associated diarrhea and traveler's diarrhea.

### How do they work?

The human body harbors 100 trillion bacteria which interact with one another in a variety of ways. A great number of these bacteria live in the intestine. Viral and bacterial infections of the GI tract, as well as using antibiotics, alter the normal gastrointestinal flora (microorganisms) which plays a role in the development of diarrhea.

### Are they effective and safe?

Not all probiotics are the same. Different probiotics have been studied for various conditions with different levels of efficacy. Lactobacillus, Bifidobacterium and Saccharomyces boulardi are all safe for the generally healthy population. Since the safety of probiotics has not been thoroughly established in young children, elderly people and people with compromised immune symptoms, people in these groups should consult a healthcare provider before using probiotics.

### For what conditions do you recommend using a probiotic?

**Treatment of acute infectious diarrhea:** There is very good evidence from high quality studies that probiotics can be helpful for the treatment of acute diarrhea. Probiotics reduced the number of people still with symptoms of diarrhea 3 days after starting treatment compared with placebo. A number of studies using various probiotics have been used including Culturelle (Lactobacillus Rhamnoses at dose of 10 Billion CFU per pill).

**Prevention of antibiotic associated diarrhea including C. difficile:** Antibiotic associated diarrhea is common because the antibiotics kill many normal *or "good"* bacteria in the gut enabling bacteria that cause diarrhea to overgrow. The magnitude of the problem depends on the antibiotic being used. The risk of diarrhea is less than 5% when using doxycycline and the risk may approach 30% with the use of Augmentin. There is good evidence from high quality studies that probiotics reduce the risk of diarrhea. Culturelle, one of the probiotics studied, reduced the incidence of diarrhea 41% in one study. The dose for Culturelle is one pill containing 10 billion CFU daily each day that antibiotics are taken.

**Prevention of traveler's diarrhea:** There is good evidence that probiotics can help reduce the risk of traveler's diarrhea. There was a 15 % reduction in the risk of traveler's diarrhea when taking probiotics. Again Culturelle was used in some of the studies which showed benefit.

**Relief of symptoms of irritable bowel syndrome:** There are fewer studies for this indication but one study using Align capsules at a dose of 10 billion CFU daily showed an average reduction of symptoms of 20%. There are no long term studies on the use of probiotics for irritable bowel symptoms.

### Where can I get probiotics?

Probiotics are available over the counter. Culturelle is available at the UHS pharmacy at a much lower cost than at pharmacies in the community. Align, which we recommend only for irritable bowel syndrome, is available at area pharmacies.

Check our website: <u>www.uhs.berkeley.edu</u> to learn more about this medical concern or others.

For an appointment <u>www.uhs.berkeley.edu</u> or call **510-642-2000** Clinic *Nurse* **510-643-7197** for advice

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