

Go With Your Gut: Understanding Probiotics¹

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What are probiotics?

Probiotics are known as “good bacteria.” Often, when we think of bacteria, we think about the ones that cause sickness, and while there are many bacteria that can cause disease, there are many more that are beneficial to our health. Probiotics are live microorganisms that, when administered in adequate amounts, provide a health benefit.⁽¹⁾

Many probiotics are *Lactobacillus* or *Bifidobacterium* species. Some common probiotic bacteria are listed below:

- *Lactobacillus acidophilus*
- *Lactobacillus casei*
- *Lactobacillus rhamnosus*
- *Bifidobacterium longum*
- *Bifidobacterium infantis*
- *Bifidobacterium breve*
- *Bifidobacterium bifidum*

Some yeasts can also be probiotics. A common probiotic yeast is *Saccharomyces boulardii*.

What are the benefits of probiotics?

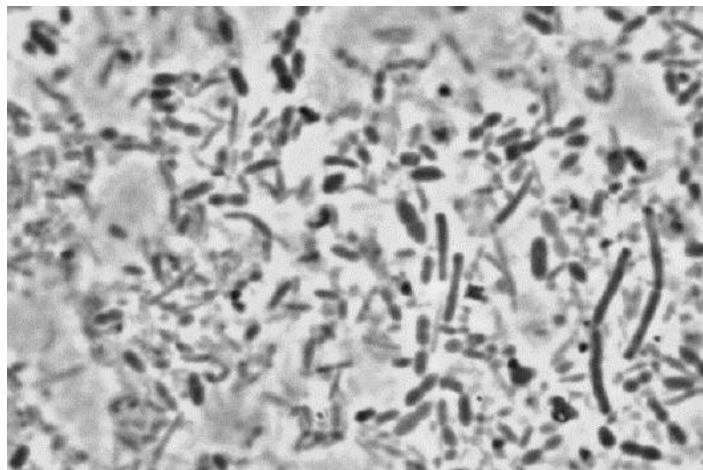


Figure 1. Probiotics help keep the balance of bacteria in our gastrointestinal tracts in check.
Credits: See next.

The balance of bacteria in our gastrointestinal tract may be disturbed by a change in diet, contaminated food, stress, antibiotics, or aging. Probiotics can help restore and maintain intestinal balance.

Probiotics can prevent traveler’s diarrhea and may also help prevent constipation.⁽²⁾ Probiotics may also play a role in preventing or treating a number of gastrointestinal diseases.⁽²⁾ Research is being carried out to determine how probiotics may affect immune function and allergies,⁽³⁾ as well as mood and well-being.⁽⁴⁾

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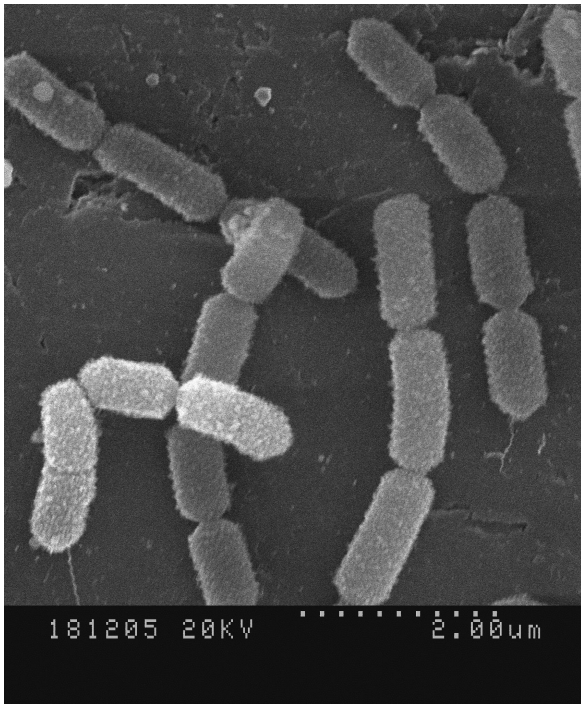


Figure 2. *Lactobacillus rhamnosus* R0049
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How do probiotics work?

Probiotics promote health by:

- Producing substances in the gut, such as lactic acid, that help to slow the growth of disease-causing bacteria.
- Competing with disease-causing bacteria for nutrients and space.
- Breaking down toxins.
- Affecting the nerve and muscle function of the gut.

But probiotics do not live permanently in the gut—they need to be ingested frequently if they are to exert their beneficial effects.

What makes a good probiotic?

Probiotics need to be alive when they reach the gut. A good probiotic, therefore, needs to be able to survive the acidic environment of the stomach *and* resist other bacteria.

A good probiotic must also be safe—many of the most common probiotics have long been used for dairy fermentations and are generally considered to be so. To ensure

safety, however, probiotics must be accurately identified, free from contamination, and labeled properly. Probiotics are tested to make sure they do not cause stomach upset, diarrhea, or other side effects. Also, probiotics are tested further to make sure they have positive effects on human health.

Are there risks in taking probiotics?

Probiotics are thought to be safe for healthy people. However, people with suppressed immune function, including but not limited to HIV/AIDS patients, transplant patients, and some cancer patients, should consult their doctors before taking a probiotic.⁽²⁾

Shopping for probiotics

Probiotics are available in capsules and as powders. Well known brand names are Culturelle® *Lactobacillus* GG, Florastor® *Saccharomyces boulardii* lyo, and Bacid® *Lactobacillus rhamnosus*.

Probiotics are added to some foods. Many yogurt brands contain probiotics. Probiotics may also be found in specialty fermented milk beverages, snack bars, fruit drinks, and breakfast cereals.

Summary

Probiotics are live microbes with health benefits. They are effective in maintaining and restoring the balance of microbes in our gastrointestinal tract. With more research, other health benefits may be found.

Endnotes

⁽¹⁾ Food and Agriculture Organization (FAO) of the United Nations and World Health Organization (WHO). *Guidelines for the Evaluation of Probiotics in Food*. Report of a Joint FAO/WHO Working Group on Drafting Guidelines for the Evaluation of Probiotics in Food.

⁽²⁾ Verna EC, Lucak S. Use of probiotics in gastrointestinal disorders: what to recommend? *Therap Adv Gastroenterol*. 2010;3(5):307–19.

⁽³⁾ Borchers AT, Selmi C, Meyers FJ, Keen CL, Gershwin ME. *Gastroenterol*. 2009;44(1):26–46.

⁽⁴⁾ Messaoudi M, Lalonde R, Violle N, Javelot H, Desor D, Nejdi A, Bisson JF, Rougeot C, Pichelin M, Cazaubiel M, Cazaubiel JM. Assessment of psychotropic-like properties

of a probiotic formulation (*Lactobacillus helveticus* R0052 and *Bifidobacterium longum* R0175) in rats and human subjects. *Br J Nutr.* 2010;26:1–9.