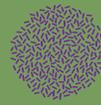


# PROBIOTICS



## Not all germs are bad!

Trillions of microorganisms, such as bacteria, viruses and fungi, live in the human body. In fact, these microbes outnumber human cells 10-to-1. Some are associated with good health and others with bad health. Probiotics are among a group of beneficial microorganisms naturally found in the body and tend to have a positive impact on health. Increasing the balance of these good microbes, through consumption of prebiotic and probiotic foods or supplements, may help reduce illnesses and promote overall health.

### What are probiotics?

Probiotics are specific strains of bacteria and yeast that occur naturally in fermented foods, such as yogurt or sauerkraut. They are also available as dietary supplements. Fermented products containing probiotics date back to 6000 B.C., but the health benefits of these microorganisms were not discovered until the early 20th century. Since then, along with an increasing interest in fermented foods, probiotic supplements have gained popularity and can be found in many forms, such as beverages, pills, powders and even skin care.

In the body, probiotics tend to cluster in the large intestine with other microorganisms that comprise the gut microbiome. The gut microbiome plays an important role in immune function, digestion and metabolism. The composition of the gut microbiome — the type and number of microorganisms — is unique to each person. The gut microbiome can influence health status and can be manipulated through diet with foods, beverages and supplements. Prebiotics, which include dietary fibers, act as a source of food for the healthy gut bacteria. Consuming both prebiotics and probiotics may have a positive impact on the microbial balance and overall function of the gut microbiome.

#### Common Probiotics (by genus):

Lactobacillus  
Bifidobacterium  
Saccharomyces  
Streptococcus  
Enterococcus  
Escherichia  
Bacillus

### Probiotics and health

Good bacteria are an essential part of gut health, aiding in the digestion and absorption of food and nutrients. The health of the gut, however, impacts more than just digestion. Probiotics can protect against hostile bacteria within the gut, creating a first line of defense against infections. Good bacteria, such as those found in probiotics, can also help prevent chronic inflammation associated with gastrointestinal diseases such as ulcerative colitis and Crohn's disease.

The benefits of a healthy gut go beyond digestion and the gastrointestinal tract. Probiotics appear to promote cardiovascular health, improve symptoms of depression and reduce severity of some allergies. It is estimated that 70-80% of the immune system is located in the gut, implying that our overall capacity to resist infection and disease is impacted by our gut health. Gut bacteria also produce most of the serotonin, a neurotransmitter known for boosting mood and promoting healthy sleep, that circulates in the blood. Research on the importance of the gut microbiome in supporting human health is ongoing. However, it is known with certainty that foods and nutrition play a major role in maintaining a healthy gut microbiome.

## Overnight Oats

Whole oats are a healthy grain that has prebiotic benefits. This recipe combines the prebiotic-rich oats and banana with probiotic-rich Greek yogurt to make a delicious gut-healthy breakfast!

- ½ cup milk or dairy free alternative
- ½ cup plain Greek yogurt
- ½ cup old-fashioned rolled oats
- 1 teaspoon chia seeds or flax seeds
- 1 teaspoon vanilla extract
- ½ banana, mashed (optional)

- Combine all ingredients in a glass jar and stir.
- Refrigerate 5 hours or overnight.
- Eat as is or top with your favorite fruits, nuts, nut butters, granola, honey or spices.

## Eating for gut health

Diet is a primary determinant of gut microbiome composition. A diet rich in fibrous foods, such as beans/legumes, whole grains, vegetables and fruits, supports probiotic populations in the gut. These prebiotic foods fuel the growth and development of a variety of probiotic bacteria.

Of course, direct consumption of foods containing probiotics, such as fermented foods and foods with live, bacterial cultures, can also support development of a healthy gut.

In the grocery store, a simple way to find products that contain probiotics is to look for the phrase “live and active cultures” in the ingredient list and possibly elsewhere on the product label. Typically, bacterial or yeast cultures are used to initiate the fermentation process. So, foods such as yogurt, sauerkraut, tempeh, kombucha and naturally fermented sour pickles can be sources of probiotics. If these foods do not appeal to you, try to incorporate more prebiotics, such as vegetables, herbs and fruits, into your purchases and meals.

If you choose to supplement, be aware that these products are less regulated than prescription drugs. Consult with your doctor on which brands or compositions may work best for you. If you are new to probiotics and prebiotics, you may experience mild digestive symptoms, just as when increasing dietary fiber. Try integrating small amounts at first and slowly increase as needed and able.



**Try these healthy probiotic foods:** Apples, asparagus, bananas, barley, blueberries, cabbage, chickpeas, cocoa, flaxseeds, garlic, Jerusalem artichoke, kidney beans, leeks, lentils, mushrooms, onions, spinach, whole oats and other whole grains.

A healthy diet promotes a healthy gut. Your gut health will influence your general health. Consuming prebiotics and probiotics from a diet rich in plant-based, fibrous foods, as well as foods with live active cultures and fermented foods or beverages, can promote growth of healthy bacteria within the gut. Incorporating these foods one spoonful, slice or sip at a time can have lasting impacts on your health.

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Pub. 3860 (online) 9/22

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