

Probiotics

Probiotics are defined as “live microorganisms, which when administered in adequate amounts, confer a health benefit on the host.” Probiotics work by colonizing and interacting with the gut [microbiome](#), inhibiting the growth of pathogens, and producing beneficial compounds.

Probiotics, found in fermented foods and probiotic supplements, include microorganisms from the following species:

- Bifidobacteria
- Lactic acid bacteria
- Spore-forming bacteria
- Yeast

Health benefits of probiotics

- Addressing digestive conditions (e.g., [constipation](#), [diarrhea](#), [irritable bowel syndrome](#) (IBS), necrotizing enterocolitis, ulcerative colitis)
- Assisting in weight loss
- Improving cardiometabolic disease risk
- Improving chronic [inflammation](#)
- Increasing nutrient absorption in the digestive tract
- Inhibiting allergic and [autoimmune](#) responses
- Preventing gastrointestinal symptoms associated with antibiotics
- Producing beneficial compounds (e.g., [antioxidants](#), [B vitamins](#), short-chain fatty acids)
- Regulating gut-brain communication
- Regulating immune reactions to bacteria and viruses



Special considerations

Consuming prebiotics, either from plant-based dietary sources or prebiotic supplements, may support the activity and survival of probiotics. Prebiotics provide a source of energy for these live microorganisms.

It's important to note that the biological activity of probiotics is specific to the individual strain, which means that the health effects observed in one strain cannot be generalized to other strains. Consult with your integrative healthcare practitioner for the best probiotic and/or prebiotic supplement for your specific health goals.

Dietary sources of probiotics

Fermented foods may contain probiotics, which are naturally produced during fermentation or added during the production process. The quantities of beneficial microbes found in the following dietary sources vary between brands due to differences in factors such as ingredients, preparation, packaging, and distribution method.

Fermented foods



Cheese



Kefir



Kimchi



Kombucha



Pickles



Sauerkraut



Wine



Yogurt

 Vegan-friendly

Probiotic supplements

Probiotic supplements may contain individual strains or combinations of microbial strains. Generally, the effects of a product will vary based on the strain(s) and dosages of each included. Probiotics are safe for most populations; however, adverse effects such as gastrointestinal symptoms may occur.

Probiotic supplement dosage is measured by colony forming units (CFU), the amount of probiotic cells in one serving. Some brands list CFUs “at time of manufacture,” while others list CFUs on the “expiration date” or “use by date,” which is a better indicator of the product’s potency over its lifespan.

The CFUs found in a product decrease over time when exposed to elevated temperatures or moisture. Shelf-stable products do not require refrigeration, while heat-sensitive products require ice packs for shipping and refrigeration for storage. Always follow the recommended storage directions on the product label.



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