

## PROBIOTICS

# What Are Probiotics?

- ▶ Probiotics are living, microscopic (very small) organisms that can help your gut health.
  - Most often, probiotics are bacteria, but they may also be other organisms, such as yeasts.
- ▶ Experts are still studying and sorting out exactly how probiotics work. They may:
  - Boost your immune system.
  - Help prevent infection.
  - Stop harmful bacteria from attaching to the gut lining and growing there.
  - Send signals to your cells to build up the mucus in your gut and help it act as a barrier against infection.
  - Stop or kill toxins released by certain bacteria that can make you sick.
  - Promote the growth of other bacteria that can improve your health.
  - Maintain healthy skin and a healthy nervous system.
- ▶ Many types of bacteria may be probiotics. Research is being done to learn more. The most common probiotic bacteria come from two groups, *Lactobacillus* and *Bifidobacterium*.
- ▶ Probiotics can now be found as a pill or powder, or in some foods, such as yogurt.



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- ▶ Probiotics have been around for many years, but lately have become more popular. There are many kinds you can buy. **Talk to your doctor about which kinds of probiotics are best for you.**
- ▶ Experts and doctors say more studies are needed to help find out which probiotics are helpful and which might be a waste of money.



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# Who Should Take Probiotics?

Since there are many kinds of probiotics, **talk to your doctor to find the right one for you.** Researchers are still learning which probiotic should be used for which symptoms or health issues. Probiotics may supplement treatments, but do not often replace them. Below are some of the most common health issues for which probiotics may help.

### Irritable Bowel Syndrome (IBS)

- IBS is an issue that can cause diarrhea (loose stool), constipation (hard stool or trouble passing stool) or both.
- Probiotics, particularly *Bifidobacterium infantis*, *Sacchromyces boulardii*, *Lactobacillus plantarum* and a blend of bacteria, may help with symptoms of IBS.
- Probiotics may help ease the sensation of bloating (swelling).

### Inflammatory Bowel Disease (IBD)

- IBD is an issue of the immune system triggering inflammation in the digestive tract. This can cause pain, diarrhea, weight loss and blood in your stool.
- Some studies suggest that probiotics may help lessen inflammation.
- Ulcerative colitis seems to react better to probiotics than Crohn's disease.
- It appears that *E. coli* Nissle, and a mixture of the strains of *Lactobacillus*, *Bifidobacterium* and *Streptococcus* may be most helpful out of the probiotics that have been tested.



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## Infectious Diarrhea

- Infectious diarrhea is caused by harmful bacteria, viruses or parasites.
- There is research to show that probiotics, such as *Lactobacillus rhamnosus* and *Lactobacillus casei*, may be helpful in treating diarrhea caused by rotavirus, which often affects babies and small children.
- Many strains of *Lactobacillus* and a strain of the yeast *Saccharomyces boulardii* may help treat and shorten the course of infectious diarrhea.

## Antibiotic-Related Diarrhea

- Research shows that taking probiotics when you first start taking an antibiotic may help stop antibiotic-related diarrhea.
- Sometimes taking an antibiotic can cause infectious diarrhea by lowering the number of beneficial microorganisms in your gut. Bacteria that may not otherwise give you any trouble, can grow out of control.
- One such bacterium is *Clostridium difficile* (*C. diff.*), which is a major cause of diarrhea in hospitalized patients and people in long-term care places, like nursing homes.
- *C. diff.* tends to come back even after treatment, but there is research that shows taking probiotics, such as *Saccharomyces boulardii*, may help stop this.
- It is important to note that most antibiotic-associated diarrhea is NOT infectious, but rather is a result of lowering the number of beneficial microorganisms in your gut.

## Other Uses

- Keeping up a healthy mouth, gums, and teeth.
- Putting off and treating certain skin issues, like eczema (a skin rash).
- Keeping up a healthy urinary tract and vagina.
- Helping allergies (mainly in children).



There is not as much research about these uses as there is about the use of probiotics to help your gut health, and studies have had mixed results. Talk to a doctor to see if probiotics could help your health issue.

## How Long Should You Take a Probiotic?

If your doctor has prescribed a probiotic for you, be sure to take it just as you are told to. If not, the helpful effects of probiotics could last only a short time and might go away within a few weeks. Probiotics are generally thought to be safe if you have a normal immune system, though there is not much known about using them for a long time.



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# Choosing the Right Probiotics

Probiotics have been around for many years. Now, there are so many to choose from it can be hard to figure out which are right for you. Scientists and doctors say more studies are needed to figure out which probiotics are helpful and which might be a waste of money.

In general, not all probiotics are the same, and they don't all work the same way. Each group of bacteria has different species, and each species has different strains. This is important to remember, because different strains from the same species may have different impacts on different parts of your body. For example, consider the species *E. coli* and the strains that come from it: Nissle are probiotics and can help the body, while other strains (e.g., 0157:H7) are pathogens and can harm the body.

Keep in mind that probiotics are considered dietary supplements and are not FDA-regulated like medicines. They are made in different ways by different companies. How well a probiotic works may differ from brand to brand and even from batch to batch within the same brand.

Probiotics also vary in cost. Higher cost does not always mean higher quality or performance.

Side effects may vary, too. The most common are gas and bloating. These are usually mild and don't last long. More serious side effects include allergic reactions, either to the probiotics themselves or to other ingredients in the products. In people with a weak immune system, they could possibly cause an infection.

Probiotics can be bought from your supermarket, pharmacy or health food store, as well as on the Internet. Not all claims made on labels are true, so talk to a health care professional for more advice.



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Here are some tips to help you choose:

## 1. Check the label.

- For the most part, the more information on the label, the better.
- The label should tell you the probiotic's group, species and strain, and how many of the microorganisms will still be alive on the use-by date. More number or type of bacteria does not mean they are more effective.
- Although some products guarantee how many organisms were present at the time it was manufactured, often it is less clear how many organisms are present when these products are actually taken.

## 2. Call the company.

- Unfortunately, many labels don't say exactly which strain is in the product; many list only the group and the species, such as *Lactobacillus acidophilus* or *Bifidobacterium lactis*.
- If you're planning to take a probiotic for a specific condition, call the company, and find out exactly which strains it uses and what research it has done to support its health claims. You may be able to find this information on its website, as well.

## 3. Beware of the Internet.

- If you order products from the Internet, make sure you know the company from which you are ordering.
- There are scammers out there who are willing to send you fake products labeled as probiotics. At best, the ingredients could be harmless, like garlic powder. At worst, they could be laced with powerful herbs, prescription medications or illegal drugs. Some companies may simply take your money and disappear.



## 4. Stick to well-established companies and companies you know.

- The longer a company has been around, the more likely its products have been tested and studied.
- Some places that have been making products with probiotics for a while are:
  - Attune Foods.
  - Bifidex.
  - BioGaia.
  - Culturelle.
  - Dannon.
  - General Mills.
  - Kraft.
  - Nestle.
  - Procter & Gamble.
  - VSL Pharmaceuticals.
  - Yakult.

**The best tip for choosing the right probiotic is to talk to your doctor.**

### Storing Probiotics

- Remember to store your probiotic according to how it says on the package. Make sure the product has a sell-by or expiration date. Probiotics are living organisms.
- Even if they are dried and dormant, like in a powder or capsule, they must be stored the right way, or they will not be helpful.
- Some require refrigeration, but others do not.
- They also have a shelf-life, so make sure you use them before the expiration date on the package.





## PROBIOTICS

# Safety of Probiotics

Most probiotics are thought to be safe, even for people without a diagnosed digestive health issue. Though probiotics seem to be safe for most people, talk to your doctor before starting to take them.

- It is not known if probiotics are safe for people with weak immune systems.
- They might not be the right thing for some seniors.
- Some may interfere with, or interact with, medicines.
- Your doctor will be able to help you decide if probiotics are right for you.

## Kids and probiotics

- Research about the use of probiotics in children has grown in recent years.
- Studies have shown that probiotics may help to treat infectious diarrhea in babies and small children.
- Researchers are still not sure if probiotics can help kids with Inflammatory Bowel Disease (IBD).
- Ask your child's doctor about probiotics before giving them to your child.

## The future of probiotics

Overall, more research is needed about the safety of probiotics in general. Future studies will show whether probiotics can be used to treat diseases, are safe to use for a long time, and if they are harmful in larger amounts. These studies will also provide guidance on which probiotics to use for different health issues.

