

A stylized profile of a human head and neck, rendered in various shades of blue and yellow. The head is filled with a bright yellow color, while the neck and lower face are in shades of light blue and dark blue. The background is white.

# What Are Prebiotics?

Dr. Alex Jimenez D.C.

## Table Of Contents

What Are Probiotics?	2
Are Ferment Food Probiotics?	5
How Probiotics Alter The Gut Microbiome	6
Eating Probiotics Like A Pro	7

# What Are Probiotics?



When a person consumes food, it is traveled down to the gut system, where it can be digested and biotransformed into nutrients in the small and large intestines. These nutrients are then absorbed into the bloodstream and are transported throughout the entire body.

These nutrients help the digestive system and provide immune support, metabolism, and body growth while helping to regulate the functions of the endocrine system, the central nervous system, and the musculoskeletal system. There are ways to optimize gut health as there are harmful pathogens that can disrupt the gut system through the usage of probiotics.

Probiotics are live microorganisms that, when administered adequately, confer a health benefit on the host. There are three important points to take away from this definition. The first is that the microorganisms have to be alive. There are many different foods around the world, predominantly fermented foods, that do contain live microorganisms. For example, kimchi, kombucha, sauerkraut, miso, dosa, curtido, and many others. The most famous fermented food is yogurt. There are often substantial numbers of microorganisms in many of these foods, and in some cases, they'll be deemed adequate. The concentration of microorganisms in many commercial probiotic capsules is extremely high. You can see on the labels that many billions of colony-forming units exist in each capsule. The widespread use of fermented foods and beverages is why many people rave about taking their natural probiotics. Still, yogurt and other fermented foods are not technically probiotics. They're considered functional foods. The third important point for probiotics is they have to confer a health benefit on the host.

## What Are Probiotics?

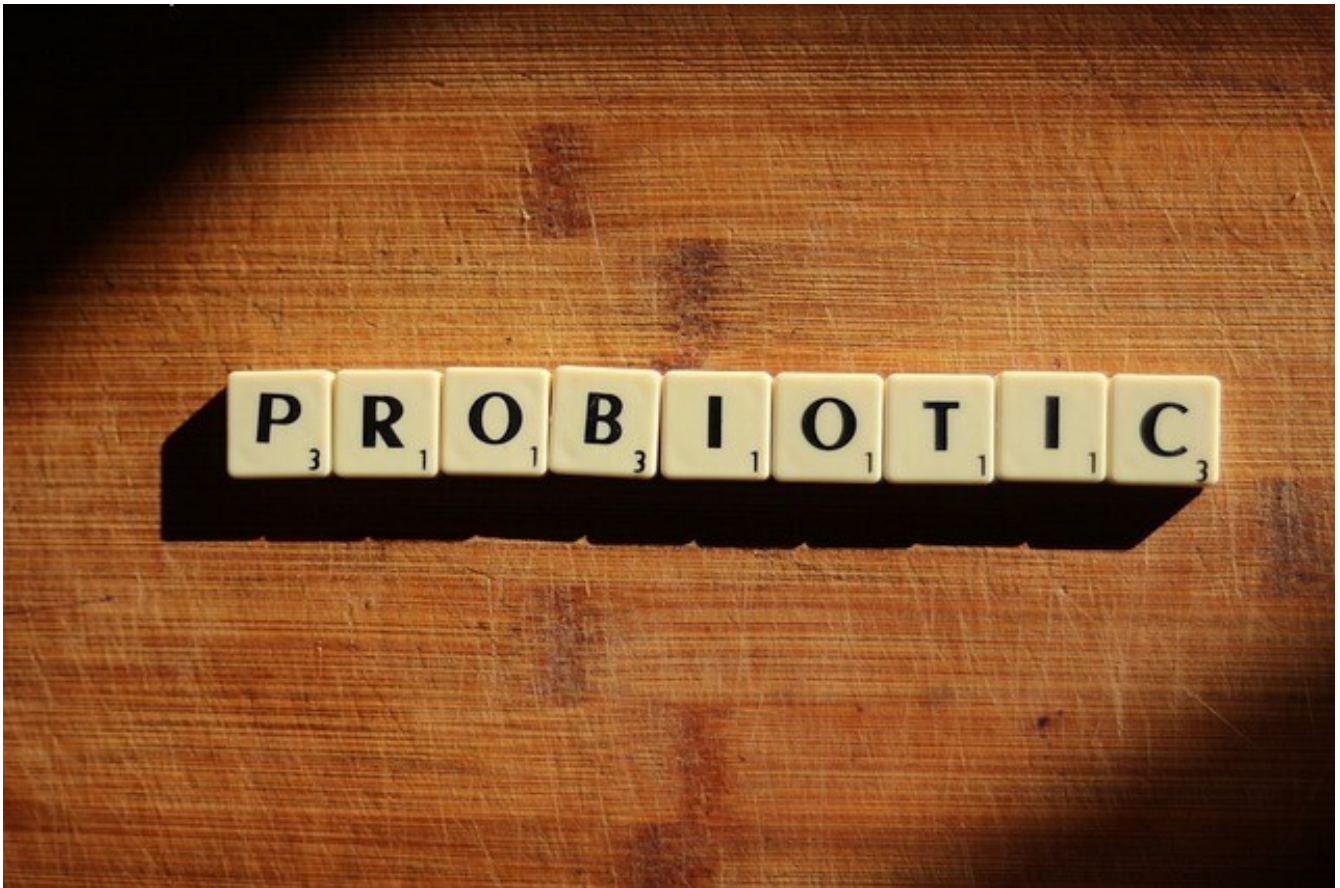
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This means we should see evidence of human health benefits in controlled clinical studies. Many fermented foods, therefore, miss out on being classed as probiotics, but a small proportion has been studied and shown to have a probiotic effect. Probiotics can come in many different formulations. The most common delivery route is orally for using tablets or capsules. Many people can add them to yogurt, fermented milk, and even cheese. Some forms of probiotics that are freeze-dried can be packaged without the need for refrigeration. Probiotics can be made as a gel for vaginal use or as a cream to be applied on the skin. I get asked a lot of questions: What probiotics should I use? This is very understandable, given the range of probiotics out there. It's a good question to ask but rather difficult to answer.



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This is because many clinical trials differ in their study design. There are differences between the strains used, especially if they are commercial, proprietary strains. There are also drastic differences between the duration and dosage of probiotic use, which comes back to the specific clinical situation. The best thing to do is to find the appropriate research data on probiotic use for a particular condition. Then, based on the relevant clinical studies, we can suggest a specific probiotic strain or strains that may be a benefit. A probiotic may not be helpful for a particular condition and should no longer replace standard medical treatment. Probiotics are an exciting new area and will surely see more developments in this field.

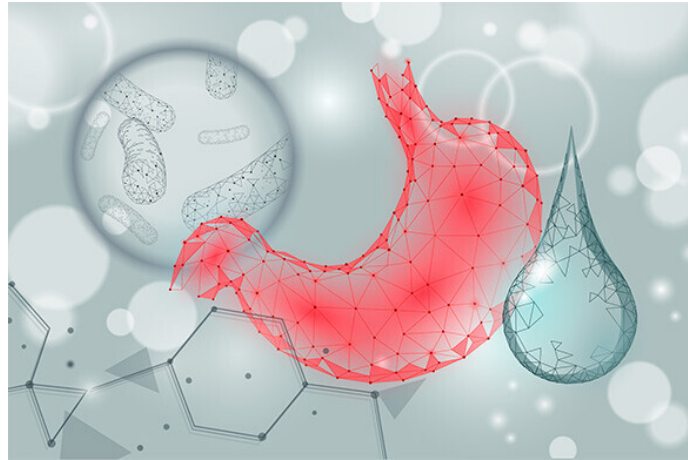


### Are Ferment Food Probiotics?



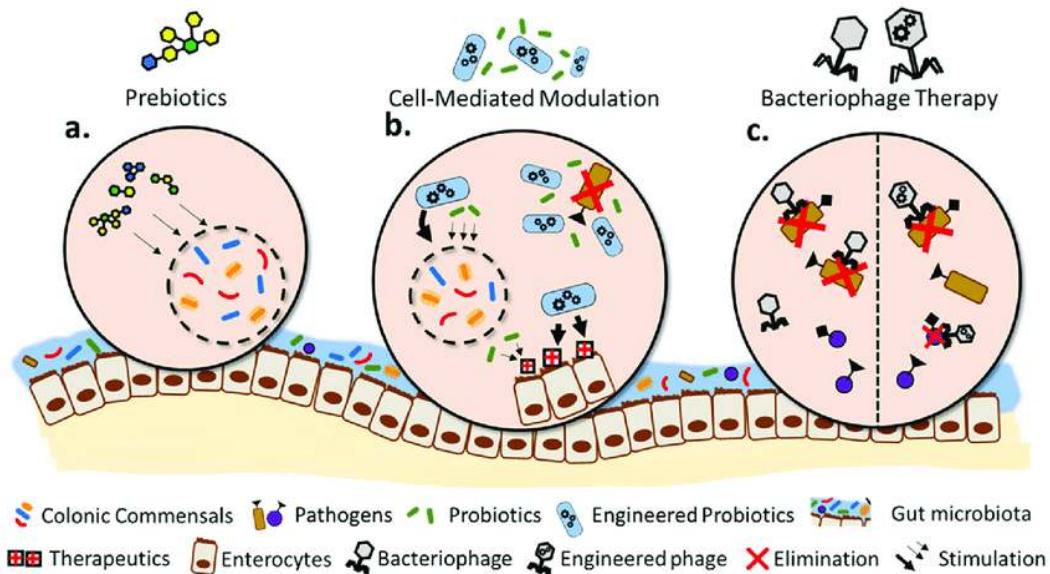
When probiotic strains are added to fermented foods, they can provide beneficial bacteria to the gut and help dampen the effects of various gut disorders. Fermented foods contain natural (or added) cultures designed to digest the food during fermentation, creating organic acids and other byproducts. However, not all fermented foods are probiotics, as these organisms are often absent from the consumed product. This is primarily due to the storage and packaging of fermented foods in containers. A few controlled trials of fermented foods have been performed to document their traditional benefits. Research studies have shown that fermented foods contain microorganisms that can reach the gastrointestinal tract and potentially affect cardiovascular, immune, and metabolic health by generating bioactive peptides and polyamines. Many individuals with gut issues should be encouraged to incorporate fermented foods into their diet but not use them as a therapeutic substitute for probiotics.

# How Probiotics Alter The Gut Microbiome



When probiotics enter the gut microbiome, the strains are thought to be highly domesticated cousins from a fraction of the total gut "wild-type" microbiota. Research studies have found that when probiotics are being ingested, they cause significant positive improvements in balancing intestinal permeability and barrier function in the gut system. Not only that, but probiotics can also provide a considerable balance to the gut microbiota and brain functionality. The gut-brain axis needs probiotics to make sure that everything is functioning correctly. Probiotics act as part of the temporary or transient gut microbiota when consumed. Other research studies have found that the impact of probiotics does not reside in the ability to graft in the gut microbiota. They share genes and metabolites while supporting a challenged gut microbiota dealing with gut and gastrointestinal disorders by directly influencing the epithelial and immune cells in the gut and the body.

## Eating Probiotics Like A Pro



With the constant flurry of health-related buzzwords floating around the Internet, “probiotics” is one that seems here to stay. Chances are you’ve read about the benefits of taking a probiotic supplement — maybe your doctor has even recommended one to you. And plenty of nutritionists are singing the praises of probiotic-rich foods like kimchi, sauerkraut and kombucha on a near-daily basis. It may seem daunting, but you don’t have to dive headfirst into a brand new diet to reap the benefits of probiotics. We chatted with wellness expert, holistic health coach and author of *Go with Your Gut*, Robyn Youkilis, to get some simple steps to achieving better gut health without overhauling your lifestyle.



## What Are Probiotics?

### You don't need a supplement

A supplement can be a great place to start, says Youkilis, but she tends to encourage her clients to get their fill of probiotics when they dine. "They taste delicious," she says. "At the heart of all of this, I'm a foodie." Add a spoonful of sauerkraut to your salad for tang. A dollop of kimchi gives your fried rice some zip. You might even already be incorporating some probiotics into your diet through chocolate, wine and sourdough bread. (Yes, you read that right. But as always, eat and drink them in moderation for a healthy diet.) The amount and types of probiotics are not quite the same as those found in yogurt or kefir, but hey, you're on the right track!

### Know how to cook with probiotics

Unfortunately, you can't rely on a diet of merlot and dark chocolate to get the probiotics you need. Probiotics work best in their raw form of live and active cultures. This means when you add probiotic-rich ingredients to meals, you don't want to cook them. Turn off the heat before adding ingredients like yogurt, kraut, pickles, kimchi or miso to your dishes. This will keep the probiotics in their natural state so you can reap the most benefit.



# What Are Probiotics?

## Time it right

If you're planning on eating and drinking your probiotics, start in the morning and try to incorporate one probiotic ingredient into each of your meals throughout the day. For example, have a yogurt with granola in the morning, a sandwich with pickled veggies for lunch and a small bottle of kefir as a snack. On the flip side, if you're taking a supplement, do it before bed, when Youkilis advises your digestive system will do a better job of digesting it.

## Don't worry about eating too many

"This is one of those things where you can't get enough of it," says Youkilis. And just like you want to eat a variety of fruits, veggies and proteins, the same goes for probiotics. Probiotics come in many different strains that each provide distinct digestive benefits, so you'll want to try to incorporate lots of different probiotic-rich foods into your diet.

## Try new things

With probiotics becoming key players in our quest to be well, major brands are designing new products with probiotics in mind. For example, Tropicana just launched Tropicana Probiotics, a line of fruit juices fortified with one billion live and active cultures per serving. Youkilis says we should expect to see more of this in the future. "People are talking about this for good reason, and brands are seeing a shift," she says.



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