

Go With Your Gut

Analysis by [Dr. Joseph Mercola](#)

✓ Fact Checked

STORY AT-A-GLANCE

- › Because 70 to 80% of your immune system resides within your gastrointestinal tract, optimizing your gut microbiome is a worthwhile pursuit that will have far-reaching effects on your physical health and emotional well-being
- › A vital first step toward balancing your gut flora is to eliminate sugar from your diet, especially sugars found in processed foods
- › Eating fermented foods such as kefir, kimchi and sauerkraut, as well as consuming prebiotic foods like garlic, leeks and onions, can help create an optimal environment for beneficial gut bacteria, while decreasing disease-causing bacteria, fungi and yeast
- › Taking a probiotic or sporebiotic supplement can also be beneficial, especially during and following antibiotic treatment, because it helps restore and promote healthy gut flora
- › Your gut bacteria can influence your behavior and gene expression, and also have been shown to play a role with respect to autism, diabetes and obesity

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More attention than ever is being put on your gut health, and understandably so because 70 to 80 percent of your immune function resides within your gastrointestinal tract. As such, optimizing your gut microbiome is a worthwhile pursuit that will have far-reaching effects on your physical health and emotional well-being.

A first important step toward balancing your gut flora is to eliminate sugar from your diet, especially sugars found in processed foods. Then, you will want to begin eating fermented foods – some examples are kefir, kimchi, natto, sauerkraut and raw grass fed yogurt.

A healthy diet, including the consumption of prebiotic foods, influences your health because it helps create an optimal environment for beneficial gut bacteria, while decreasing pathogenic or disease-causing bacteria, fungi and yeast.

Taking a probiotic or sporebiotic supplement can also be beneficial, especially during and following antibiotic treatment, to restore and promote a healthy microbiome. Many don't realize your gut bacteria can influence your behavior and gene expression. Gut bacteria have also been shown to play a role with respect to autism, diabetes and obesity.

Mounting scientific evidence continues to suggest a large component of nutrition centers on nourishing the health-promoting bacteria in your body. In doing so, you can keep harmful microbes in check, manage your weight and protect against chronic disease. Given its importance to your overall health, now is the time to "go with your gut!"

What Is Your Gut Microbiome and What Does It Affect?

Research has determined that about 100 trillion bacteria comprise your body's microbiome. However, it is far greater than that as for every bacterium there are at least 10 viruses and fungi living on or inside your body, helping with life-sustaining functions that would not be possible without them. Your microbiome takes shape very early in life.

In fact, if you were delivered via a vaginal birth, you were coated with your mother's microbes as you passed through the birth canal. More microbes were passed along during breastfeeding, as breast milk contains many gut-nurturing properties.

During the early years, your family, dietary and environmental exposures contributed to your microbiome in ways that have and will continue to influence your lifelong health.

Your microbiome is made up of several distinct areas, including your eyes, genitals, mouth and skin, as well as your intestines, which comprise your gut microbiome.

Everyday activities such as brushing your teeth, eating, kissing someone or handling a family pet affect your microbiome. Notably, your gut microbiome has been shown to play a role in:

- **Autism** — Establishment of normal gut flora in the first few weeks of life is vital to your baby's immune system. Babies with abnormal gut flora have compromised immune systems and are particularly at risk for developing ADHD, autism¹ and learning disabilities, particularly if they are vaccinated while their gut flora is imbalanced.
- **Behavior** — A study published in *Neurogastroenterology and Motility*² found mice lacking in gut bacteria behave differently from normal mice. Their altered behavior was construed as "high-risk" and was accompanied by neurochemical changes in the brain. It is widely known that your gut serves as your second brain, producing more of the neurotransmitter serotonin, which is known to have a positive influence on your mood, than your brain does.
- **Diabetes** — According to a Danish study,³ the bacterial population in diabetic guts differs from those of nondiabetics. According to researchers, Type 2 diabetes in humans is linked to compositional changes in intestinal microbiota, highlighting the link between metabolic diseases and bacterial populations in the gut.
- **Gene expression** — Your gut health has been shown to be a very powerful variable of epigenetics, a cutting-edge field of medicine highlighting the role your lifestyle plays with respect to genetic expression. As noted in ScienceDaily:⁴

"New research is helping to tease out the mechanics of how the gut microbiome communicates with the cells of its host to switch genes on and off. ... the study⁵ ... reveals how the metabolites produced by the bacteria in the stomach chemically communicate with cells, including cells far beyond the colon, to dictate gene expression and health in its host."

- **Obesity** — Because probiotics may help fight obesity, optimizing your gut flora is an important consideration if you're struggling to lose weight.

The Importance of Fermented Foods

I often mention the value of fermented foods in helping to "heal and seal" your gut as a means of boosting your health and/or reversing disease. As demonstrated in the video above, culturing vegetables is easy and inexpensive. You can also make your own homemade yogurt. Other examples of fermented foods include kefir, kimchi, natto and sauerkraut. These foods are not only packed with good bacteria, but also are associated with the following health benefits:

- **Nutrient-rich** — Some fermented foods are outstanding sources of essential nutrients such as vitamin K2, which helps prevent osteoporosis and atherosclerosis, also known as hardening of the arteries. Cheese curd is an excellent source of both probiotics and vitamin K2, as are certain fermented foods like natto or vegetables fermented at home using a starter culture of vitamin K2-producing bacteria. Fermented foods also produce many B vitamins.
- **Immune system booster** — Because up to 80 percent of your immune system is located in your gut, probiotics play a crucial role in keeping your digestive tract operating smoothly. A healthy gut is your first defense against disease and a major factor in helping you maintain optimal health and well-being.
- **Powerful detoxifier** — Fermented foods are some of the best chelators available. The beneficial bacteria in these foods are highly potent detoxifiers, capable of drawing out a range of toxins and heavy metals from your bloodstream, which are then eliminated through your kidneys.
- **Cost-effective** — Adding a small amount of fermented food to each meal is cost-effective because it contains 100 times the probiotics of the average supplement. Given that a high-quality probiotic is expensive, you can culture vegetables for a fraction of the cost.

- **Natural variety of microflora** – If you vary the types of fermented and cultured foods you eat, you'll benefit from a much wider variety of beneficial bacteria than you could ever receive in supplement form.

Eating Prebiotic Foods Can Help Nourish Your Gut

You can positively impact your friendly gut bacteria by providing them with the nutrients they need to flourish in the form of prebiotics. Prebiotics are found primarily in fiber-rich foods, which is perfect because your good gut bacteria thrive on indigestible fiber. Inulin is one type of water-soluble fiber found in asparagus, garlic, leeks and onions that helps nourish your beneficial gut bacteria.

In lab research⁶ involving young rats, dietary prebiotics were found to have a significant effect on rapid eye movement (REM) and non-rapid eye movement (NREM) sleep cycles, which may positively affect your sleep quality. Researchers studying the effect of prebiotics on gut health and REM sleep gave the test animals a diet rich in prebiotics beginning at 3 weeks old, and found:

- Rats eating prebiotics had an increase in beneficial gut bacteria as compared to the control group⁷
- As friendly bacteria metabolize prebiotic fiber, they not only grow and multiply, but also excrete a metabolite beneficial to brain health⁸
- The group eating a prebiotic-rich diet spent more time in restful and restorative NREM sleep than those eating the control diet
- Rats eating prebiotic foods spent more time in REM sleep after being stressed, which is important for promoting recovery⁹

The study authors said:¹⁰ "Given that sufficient NREM sleep and proper nutrition can impact brain development and function, and that sleep problems are common in early life, it is possible that a diet rich in prebiotics started in early life could help improve sleep, support the gut microbiota and promote optimal brain/psychological health." The

following whole foods help add prebiotic fiber to your diet and improve the health of your microbiome, thus improving your overall health:^{11,12,13}

| | | |
|-------------|----------------------|--------------|
| Apples | Asparagus | Banana |
| Beetroot | Breast milk | Burdock root |
| Cashews | Chicory root | Couscous |
| Fennel bulb | Garlic | Grapefruit |
| Green peas | Jerusalem artichokes | Jicama |
| Konjac root | Leeks | Nectarines |
| Onion | Persimmon | Pistachios |
| Pomegranate | Savoy cabbage | Seaweed |
| Shallots | Snow peas | Tamarillo |

How Probiotics Can Help

While I highly recommend you obtain most of your nutrients from real food, probiotic supplements can be helpful, especially if you are unable to eat fermented foods. That said, for probiotics to do their job, you need to optimize the conditions where these "good" bacteria will flourish.

The first step is to nourish your microbiome with real food. If you continue to eat a highly processed diet and foods containing added sugars, you'll only be feeding the potentially pathogenic bacteria in your gut. Pathogenic disease-causing microbes simply love sugar!

On the other hand, these microbes will not thrive in the presence of fiber-rich foods or those containing complex carbohydrates, healthy fats and proteins. When you focus on eating whole, natural foods, you're supporting the growth of your beneficial gut bacteria. Research suggests the benefits of probiotics aren't limited to your gut, but also affect your brain.

This is the case because your gut is connected to your brain via what's called the gut-brain axis, which means whatever affects your gastrointestinal tract affects your brain, and vice versa.

As such, when your gut microbiome is unbalanced, it can affect your immune system, mental health, mood and even your brain function. Probiotics have even been shown to help reduce the symptoms of depression. Factors to look for when trying to identify a high-quality probiotic supplement include:

- Make sure it's a reputable, non-GMO brand, manufactured according to current Good Manufacturing Practices
- Look for a potency count (colony forming units or CFUs) of 50 billion or higher
- Check the shelf life of the CFUs and avoid capsules only declaring CFUs at the "time of manufacture"
- Choose a product containing multiple species of bacteria; products containing species of Lactobacillus and Bifidobacteria are generally recommended

Sporebiotics Stand up to Antibiotics

Spore-based probiotics, or sporebiotics, are an excellent complement to regular probiotics. They are part of a group of derivatives of the microbe called bacillus. This genus has hundreds of subspecies, the most important of which is bacillus subtilis. Essentially, sporebiotics consist of the cell wall of bacillus spores, and they are a primary tool to boost your immune tolerance.

Because sporebiotics do not contain any live bacillus strains, only its spores – the protective shell around the DNA and the working mechanism of that DNA – they are unaffected by antibiotics.

Antibiotics, as you may know, indiscriminately kill your gut bacteria, both good and bad. This is why secondary infections and lowered immune function are common side effects of taking antibiotics. Chronic low-dose exposure to antibiotics through your food also takes a toll on your gut microbiome, which can result in chronic ill health and increased risk of drug resistance.

If you are wondering how antibiotics get into your food, you may not realize about 80 percent of the antibiotics sold in the U.S. are used in food production, including antibiotics given to farm animals living in concentrated animal feeding operations. Sporebiotics can more effectively help reestablish your gut microbiome since they're not being destroyed by antibiotics.

If you are not sure sporebiotics could benefit you, be advised many acidophilus products have the drawback of not being able to survive the passage through your stomach acid, especially when taken on an empty stomach.

Poor-quality probiotics may not even be alive by the time you take them, which means you'll receive little to no benefit. Spores, on the other hand, once established in your gut, help improve your intestinal barrier function. Your gut's mucosal barrier determines which nutrients are absorbed and which are to be excreted.

The intestinal barrier also influences your immune function, and spores increase your immune tolerance, which means they help repair damage in your intestinal barrier, such as that caused by leaky gut.

My longtime mentor Dr. Dietrich Klinghardt, who also holds a Ph.D., and founder of the Klinghardt Academy in Washington (state), has used sporebiotics for the successful treatment of food intolerances for those suffering from ALS, autism, Lyme disease, multiple sclerosis and Parkinson's disease.

Whatever approach you take – eliminating sugars, adding prebiotic foods, eating fermented foods, taking probiotics or sporebiotics, or all of the above – I encourage you to begin optimizing your gut. A healthy gut will boost your immunity, help your body resist disease and positively affect your health and well-being. Now is the time to "go with your gut!"

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