

## Research Reveals the Importance of Your Microbiome Gut Health for Optimal Health

Fifteen years ago, it was anticipated the Human Genome Project (HGP) would allow modern medicine to leapfrog into groundbreaking gene-based therapies for virtually every disease known to man—experts were that sure health and disease was governed by genetic predisposition.

***Much to everyone's surprise, the HGP discovered genetics are only responsible for about 10 percent of human disease.<sup>1</sup> The remaining 90 percent are induced by environmental factors, be they nutrients, toxins, or thoughts and emotions.***

In more recent years, we've come to realize that your microbiome is one of the environmental factors that drive genetic expression, turning genes on and off depending on which microbes are present.

Your body's microbiome—colonies of various microbes that reside in your gut and elsewhere in and on your body—is as unique to you as your fingerprint, and can be rapidly altered based on factors such as diet, lifestyle, and exposure to toxins and antibiotics.

You have approximately 1,000 different species of bacteria living in your body, and these bacteria actually outnumber your body's cells by 10 to 1. But that's not all. You also harbor viruses (bacteriophages), and they in turn outnumber bacteria 10 to 1.

So not only is your body the home of 100 trillion bacteria, you also house about one quadrillion viruses. All of these organisms perform a multitude of functions, and need to be properly balanced and cared for in order to maintain good health.

**There are no good or bad bacteria per se. Potentially harmful microbes only become dangerous once they start to take up too much real estate, outnumbering the more beneficial ones.**

**This also means that living in a sterile environment is by no means ideal, as health-promoting microbes are adversely affected along with potentially harmful bacteria when we wage war against bacteria with hand sanitizers and antibiotics as our prime weapons.**

## Your Microbiome Appears to Dictate Health and Disease Onset

Research shows that some microbes specifically help prevent certain disease states. For example, simply by eradicating four species of bacteria (*Lactobacillus*, *Allobaculum*, *Rikenelleceae*, and *Candidatus arthromitus*), researchers were able to trigger metabolic changes in lab animals that led to obesity.<sup>2</sup>

**Studies<sup>3,4</sup> have also found that autistic children have distinctly different microbiome compared to healthy children. Notably, they tend to have fewer beneficial bacteria such as *Bifidobacterium*.**

Importantly, your gut bacteria influence your immune responses.<sup>5</sup> The inflammatory response starts in your gut and then travels to your brain, which subsequently sends signals to the rest of your body in a complex feedback loop. Mounting research suggests your microbiome may actually be one of the preeminent factors determining your overall longevity.

Recent findings even make us reevaluate our view of a "healthy diet," as one of the primary mechanisms of action that explains how a healthy diet "works" is that it upregulates and improves the quality of your gut microbiome.

So it's not just about getting specific nutrients from your food; your food also needs to support a healthy microbiome—as it turns out though, foods known for their value to health also tend to promote beneficial gut bacteria.

Examples include traditionally **fermented foods** and raw foods, especially those high in **fiber**. Certain gut microbes actually specialize in fermenting soluble fiber found in legumes, fruits, and vegetables, and the byproducts of this fermenting activity help nourish the cells lining your colon.

Some of these fermentation byproducts also help calibrate your immune system to prevent inflammatory disorders. **Sugar, on the other hand, is a preferred food source for fungi that produce **yeast infections** and **sinusitis**.**

## The Easiest Way to Decimate Your Microbiome-Gut

Your diet can make or break your microbiome, and the easiest way to decimate the health-promoting microbes in your gut is to eat processed foods, and meats from animals raised in [confined animal feeding operations](#) (CAFOs), for the reasons discussed in this previous article.<sup>20</sup> Processed foods are typically high in added sugars—high fructose corn syrup in particular—which feeds fungi, yeast, and detrimental bacteria. But that's not all. Recent research<sup>21,22</sup> has also found that emulsifiers found in processed foods have a very detrimental effect on your microbiome, and may contribute to obesity, metabolic syndrome, and inflammatory bowel disease by altering your gut bacteria. This includes ingredients such as:

- Polysorbate 80
- Carrageenan
- Polyglycerols

Food additives such as these are all approved by the Food and Drug Administration (FDA), again highlighting the severe limitation of our current regulatory system. A 2013 study<sup>23</sup> published in the journal *Reproductive Toxicology* found that nearly 80 percent of the food additives approved by the FDA lack testing information that would help the agency estimate the amount people can safely consume before suffering health consequences. Processed non-organic foods also tend to contain [glyphosate residues](#), which also take a drastic toll on your microbiome, as this commonly used herbicide is also patented as an antibiotic.

## Optimizing Your Microbiome Is a Potent Disease Prevention Strategy

I believe optimizing your gut flora may be one of the most important things you can do for your health, and here you can wield your personal power to the fullest by making healthy food and medical choices. Not only can optimizing your gut health help normalize your weight and ward off diabetes, it's also a critical component for a well-functioning immune system, which is your primary defense against virtually all disease.

The good news is that supporting your microbiome isn't very complicated. However, you do need to take proactive steps to implement certain key strategies while actively avoiding other factors. To optimize your microbiome both inside and out, consider the following recommendations:

### Do:

#### **Eat plenty of fermented foods.**

Healthy choices include lassi, fermented grass-fed organic milk such as kefir, [natto](#) (fermented soy), and [fermented vegetables](#). If you ferment your own, consider using a special starter culture that has been optimized with bacterial strains that produce high levels of [vitamin K2](#). This is an inexpensive way to optimize your K2, which is particularly important if you're taking a vitamin D3 supplement.

#### **Take a probiotic supplement.**

Although I'm not a major proponent of taking many supplements (as I believe the majority of your nutrients need to come from food), probiotics is an exception if you don't eat fermented foods on a regular basis

**Boost your soluble and insoluble fiber intake**, focusing on vegetables, nuts, and seeds, including sprouted

### Avoid:

**Antibiotics**, unless absolutely necessary (and when you do, make sure to reseed your gut with fermented foods and/or a probiotics supplement). And while some researchers are looking into methods that might help ameliorate the destruction of beneficial bacteria by antibiotics,<sup>24,25</sup> your best bet is likely always going to be reseeding your gut with probiotics from fermented and cultured foods and/or a high quality probiotic supplement.

**Conventionally-raised meats** and other animal products, as CAFO animals are routinely fed low-dose antibiotics, plus [genetically engineered grains](#) loaded with glyphosate, which is widely known to kill many bacteria.

#### **Chlorinated and/or fluoridated water.**

Especially in your bathing such as showers, which are worse than drinking

## Do:

seeds.

### **Get your hands dirty in the garden.**

Germ-free living may not be in your best interest, as the loss of healthy bacteria can have wide-ranging influence on your mental, emotional, and physical health. Exposure to bacteria and viruses can serve as "natural vaccines" that strengthen your immune system and provide long-lasting immunity against disease. Getting your hands dirty in the garden can help reacquaint your immune system with beneficial [microorganisms on the plants and in the soil](#). According to a recent report,<sup>26</sup> lack of exposure to the outdoors can in and of itself cause your microbiome to become "deficient."

**Open your windows.** For the vast majority of human history the outside was always part of the inside, and at no moment during our day were we ever really separated from nature. Today, we spend 90 percent of our lives indoors. And, although keeping the outside out does have its advantages it has also changed the microbiome of your home. Research<sup>28</sup> shows that opening a window and increasing natural airflow can improve the diversity and health of the microbes in your home, which in turn benefit you.

**Wash your dishes by hand instead of in the dishwasher.** Recent research has shown that [washing your dishes by hand](#) leaves more bacteria on the dishes than dishwashers do, and that eating off these less-than-sterile dishes may actually *decrease* your risk of allergies by stimulating your immune system.

## Avoid:

it.

**Processed foods.** Excessive sugars, along with otherwise "dead" nutrients, feed pathogenic bacteria. Food emulsifiers such as polysorbate 80, carrageenan, and polyglycerols also appear to have an adverse effect on your gut flora.<sup>27</sup> Unless 100% organic, they may also contain GMOs that tend to be heavily contaminated with pesticides such as [glyphosate](#).

**Agricultural chemicals, [glyphosate](#)** (Roundup) in particular is a known antibiotic and will actively kill many of your beneficial gut microbes if you eat and foods contaminated with Roundup

**Antibacterial soap**, as they too kill off both good and bad bacteria, and contribute to the development of antibiotic-resistance.