

The Belly's Microbiome Part 1

by [Lisa Sarasohn](#)

What's in a belly?

A microbiome, a world teeming with single-celled organisms, a.k.a. bacteria.

Consider yourself endowed with a newly-named [organ](#). You've got heart, lungs, kidneys. Now add "microbiome" to the inventory.

The population of microbes in your gut is [big](#). The [100 trillion](#) bacteria in your gut represent ten times the number of cells in your body that pack your personal brand of DNA. Of all the cells you tote around, only 10% are genetically you. The rest are bacteria, as many as 1,000 different species flaunting 3.3 million unique genes. That's 150 times the number of genes coded into your 46 chromosomes. That's a lot of adjunct bio-programming power.

Although the number of microbes is huge, as individuals they're [tiny](#). Consequently, your gut microbiome comes in at 1 to 3 percent of your body's mass. A 125-pound adult, for example, is toting between 1.25 and 3.75 pounds of bacteria.

Do not consider eliminating these bacteria for an easy four-pound weight loss. You need them. They're essential to your physical health and mental sanity.

The roster of bacteria in your gut — which kinds are present in what proportions — depends on factors such as what you eat, which drugs you've taken, and how well your immune system is functioning. Depending on the diversity of and balance among your gut-based bacteria, the microbes are busy promoting digestion, making nutrients, secreting enzymes, eliminating infections, influencing mood and behavior.

Mood and behavior? In the summer 2007 issue of the [Belly Bulletin](#), I featured an [excerpt](#) from *Gut & Psychology Syndrome*, the book in which British neurologist and nutritionist Dr. Natasha Campbell-McBride reveals the gut microbiome's influence on the body-mind, especially in relation to childhood autism. She suggests ways to reestablish a healthy population of gut bacteria, largely through a set of food choices that regulate carbohydrates.

A few months after posting the excerpt, I received this [news](#) from a reader:

I bought *Gut & Psychology Syndrome* for a friend whose four-year-old had been diagnosed with autism. He wasn't speaking.

Then, after being on the diet the book recommends for less than a month, he started speaking in complete sentences and making marked improvements in other areas.

Autism is only one of several body-mind disorders that scientists are considering in relation to what's going on in the gut. The status of your belly-based bacteria may, for example, play a key role in obesity, irritable bowel syndrome, inflammatory bowel disease, autoimmune diseases, allergies, and metabolic syndrome — the collection of risk factors, including insulin resistance, that increase the likelihood of coronary artery disease, stroke, and diabetes.

Future columns will elaborate on your belly's microbiome in relation to your physical and emotional health as well as the possibility of its link to — guess what? — an ancient image of the Sacred Feminine.

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