

Researcher Interview

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Interviewed on
December 23, 2019

Q1

Recently, I've been hearing the term "gut-brain axis." What does that mean?

A1

For example, when you feel stressed and your stomach begins to hurt, or when the mucus lining of your stomach gets inflamed and you feel anxious, which then changes your behavior or appetite. Your brain and gastrointestinal tract are intimately connected and they affect one another. Intestinal flora, or "gut flora," are being researched intensely for their important role in the gut-brain axis.

Q2

What is gut flora?

A2

In the human gastrointestinal tract, there are hundreds of trillions of bacteria of over 1,000 different varieties, and these are collectively known as "gut flora." The balance (between the number and variety) of these bacteria is different for each individual, and it can change depending on diet. Having an unbalanced diet (lacking in dietary fibers, or high in fats) can lead to fluctuations in good and bad bacteria, and this causes a gut flora imbalance known as dysbiosis.

Q3

What can we do to promote healthy gut flora (and prevent dysbiosis)?

A3

First, by directly ingesting probiotics, such as lactic-acid bacilli, which are microbes (good germs) that are known to have a positive effect on the human body. Second, by ingesting prebiotics, like dietary fibers and oligosaccharides, which promote good bacteria or reduce bad bacteria. These things have been reported to treat dysbiosis. We have also shown that drinking alkaline ionized water has a prebiotic effect and changes the balance of intestinal flora in mice, as well as increases the levels of useful short-chain fatty acids in their bodies.