How the Gut Microbiome affects the Brain and Mind (video)

The gut microbiota is a huge topic and has some very significant implications for health and nutrition.

> *Especially considering the Gut Microbiome is the big topic in health and science recently, you may know that not all microbes are bad. While there are pathogenic microbes like these just mentioned, at all times there are 500 to 1000 different species of bacteria in the human body. And the importance of their function is becoming more apparent as we learn new things about them.*
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> *However, it's hard to picture how tiny microbes in our gut contribute to our day to day cognition and brain function. In the case of rocky mountain spotted fever it may not be surprising that the introduction of a deadly pathogen could induce drastic changes in a person's mental state. However, the relationship between the microbes normally residing in the gut and how our brain operates becomes apparent when we take them out.*

Related: *How To Heal Your Gut*

> *A 2012 paper by Dr. Derrick MacFabe describes what happens when rats are injected with something called Propionic Acid or PPA. The PPA injection provoked peculiar changes in the rats' brains like neuroinflammation, increased oxidative stress, and glutathione depletion. The rats also displayed abnormal movements, repetitive interests, cognitive deficits, and impaired social interactions. Basically, the results of this injection were very similar to autism spectrum disorders. And, PPA is a fermentation product of bacteria,*

namely Desulfovibrio, Bacteroidetes and Clostridia. It was found that patients with autism have many more species of the clostridium bacteria and have high levels of PPA in their feces.

Several reports from parents say that their children were developing normally until they received antibiotics for upper respiratory or ear infections. It's estimated that in one third of patients, autism doesn't show up until around 18 to 24 months. According to Dr.

Sydney Finegold , antibiotics wipe out or suppress several organisms in the gut, but Clostridia is one of the ones that persists.

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