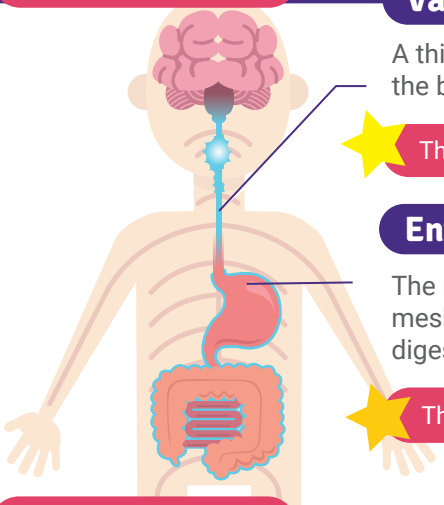
Ways our Mind and Gut are Connected

CDHF.ca

Having “butterflies” in your stomach when you are nervous is proof that our brain and guts are talking to each other.

But How?

Vagus Nerve



A thick cable of neurons running between the base of the brain and our gut allows them to communicate

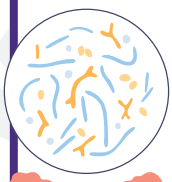
This is also known as the gut-brain axis

Enteric Nervous System

The network of nerve cells (100 million mesh-like body neurons) that make up your digestive tract.

This is also called the “second brain” [2]

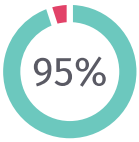
Gut Microbiota



The trillions of microbes that reside in your gut and play an integral role in your health.

The gut microbiota communicates by producing and storing over 30 neurotransmitters (chemical messengers in the body).

Healthy Gut = Happy You



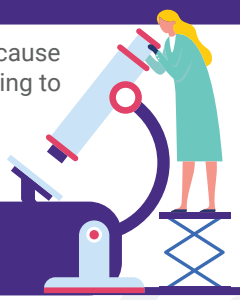
Your gut microbiota produces over 95% of serotonin (known as “the happy chemical”), directly affecting your mood, and wellbeing. [1,2]

90% of the neurons in the vagus nerve are sending messages from the gut to the brain rather vs from your brain to your gut.

The signals generated in the gut can massively influence the brain; and explains why digestive problems can cause anxiety and stress!

Researchers suggest that disrupting the healthy balance of bacteria in the microbiota can cause the immune system to overreact and contribute to inflammation of the digestive tract, leading to symptoms of disease that occur throughout your body and brain.[3,4,5]

By giving your gut microbiota the nutrition it needs, it will take care of you. [6]



While the research is still relatively in its infancy, there are a few things we can confidently recommend to promote digestive health:

Getting enough fibre.

Women need 25g
men need 38g[7]

Focusing on dietary variety.

Especially plant-based foods

Reducing excess intake of red & processed meats

Reducing intake of highly processed foods that are often high in sugar and fat, and low in nutrients & fibre

Enriching our diet with things like probiotics and fermented foods can support gut health.[8]

Buyer Beware: Not all probiotics are made equal, so we always suggest you talk to your doctor or dietitian before choosing one that’s right for you.

1.https://www.medicalnewstoday.com/articles/292693
2.https://www.apa.org/monitor/2012/09/gut-feeling
3.Dickerson F, Severance E, Yolken R. The microbiome, immunity, and schizophrenia and bipolar disorder. Brain, Behavior, and Immunity. May 2017;62:46-52 https://www.sciencedirect.com/science/article/pii/S0889159116305578?via%3Dihub [Abstract]
4.Gut Microbia (Mucosal Immunology, 4th Ed. 2015). Elsevier/Science Direct https://www.sciencedirect.com/topics/medicine-and-dentistry/gut-microbiota [Abstracts]
5.Mayer EA, Knight R, Mazmanian SK, Cryan JF, Tillisch K. Symposium: Gut Microbes and the Brain. The Journal of Neuroscience. November 12, 2014;34(46):15490-15496. http://www.jneurosci.org/content/jneuro/34/46/15490.full.pdf
6.Information About Gut Microbiota. (2020, February 28). Retrieved from https://www.gutmicrobiotaforhealth.com/about-gut-microbiota-info/
7.Health Canada; Fibre (2019, January 22). Government of Canada. Retrieved from https://www.canada.ca/en/health-canada/services/nutrients/fibre.html
8.Fermented Foods. (n.d.). Retrieved from https://isappscience.org/for-scientists/resources/fermented-foods/