The Gut and the Brain

The enteric nervous system that regulates our gut is often called the body’s “second brain.” Although it can’t compose poetry or solve equations, this extensive network uses the same chemicals and cells as the brain to help us digest and to alert the brain when something is amiss. Gut and brain are in constant communication.

“There is immense crosstalk between these two large nerve centers,” says Braden Kuo, MD, MMSc ’04, co-executive director of the Center for Neurointestinal Health at Massachusetts General Hospital and assistant professor of medicine at Harvard Medical School. “This crosstalk affects how we feel and perceive gastrointestinal symptoms and impacts our quality of life.”

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Faculty First Person

Stephen Liberles, AB ’94, AM ’96, PhD ’00

Our brain is the command center of the body. In addition to crafting decisions, emotions, and movements, the brain also maintains essential autonomic functions, such as breathing, heart rhythm, and digestion. My lab studies the vagus nerve, the principal information highway connecting the brain with many peripheral organs, such as the lungs, heart, and gastrointestinal tract.

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In the News

Face Value

A Harvard Medical School team has found that regions of the brain that are key to facial recognition form only through experience, shedding light on a range of neuro-developmental conditions. Read more »

How to Defend Against Your Own Mind

Harvard Professor Mahzarin Banaji, MA, PhD, is launching a new project called Outsmarting Human Minds, which aims to use short videos and podcasts to expose hidden biases and explore ways to combat them. Read more »

Game Changer

HMS researchers at Massachusetts Eye and Ear have found that brain training can improve elderly people’s understanding of speech in noisy places and can provide about three times more benefit than hearing aids alone. Read more »