



NSIPM & Sano Wellness Center

Bowel Ecology Balance

One of the Most Critical Components of Health

Can you Accurately Assess, Measure, Monitor and Address it?

The defense of the body is vested largely in the lymphatic system and its lymphocytes. A substantial part of the gastrointestinal tract is occupied by lymphoid tissue. It is estimated that as much as **70% of the immune system** is located in the gut (gastrointestinal immunity).

- **Mycotoxins, fungal overgrowth, bacterial imbalance, and parasitic infestation** are main stressors that cause constriction of the sphincters of digestion and disrupt the habitat of the intestinal tract, which constitutes 70% of our immune function.
- Prestigious university studies consistently show that bowel **dysbiosis is a major cause** of food and environmental allergies, brain fog, headaches, anxiety, fatigue, skin disorders, ocular disorders, depression, pain, Epstein Barr and other viral disorders, and a host of other health problems.
- **Chronic imbalance in the microflora** of the body causes endocrine, metabolic, and immune deficiencies.
- Many of your patients are and continue to remain **malnourished and toxic no matter what diet or herbal and nutritional supplement program** they may be following.
- A **mutated and toxic digestive tract** underfeeds us, induces and promotes inflammation, a root cause of all illness, and derails neuro-hormonal functions.

If you want maximum nutrient output and complete detoxification, you **need a healthy, thriving and sustainable inner ecosystem.**

The Abdominal Brain

Additionally, our GI tract is the seat of a **second brain**, technically known as the **enteric nervous system**. It consists of sheaths of neurons embedded in the walls of the long tube of our gut, or alimentary canal, which measures about nine meters end to end from the esophagus to the anus. According to Michael Gershon, chairman of the Department of Anatomy and Cell Biology at New York-Presbyterian Hospital/Columbia University Medical Center, an expert in the field of neurogastroenterology and author of the 1998 book ***The Second Brain*** (HarperCollins), this second brain contains some **100 million neurons**, more than in either the spinal cord or the peripheral nervous system.

Thus equipped with its own reflexes and senses, the second brain can control gut behavior independently of the brain, Gershon says. For example, scientists were shocked to learn that about

90% of the fibers in the primary visceral nerve, the vagus, carry information from the gut to the brain and not the other way around.

This second brain actually informs our state of mind in many ways. A big part of **our emotions are in fact influenced by the nerves in our gut**. Although gastrointestinal (GI) distress alone can affect one's moods, everyday emotional well-being also relies on messages from the brain below to the brain above.

Scientists are learning that the serotonin made by the enteric nervous system might **also play a role in more surprising diseases**: In a new *Nature Medicine* study published online February 7, a drug that inhibited the release of serotonin from the gut counteracted the bone-deteriorating disease osteoporosis in postmenopausal rodents. (*Scientific American* is part of Nature Publishing Group.) "It was totally unexpected that the gut would regulate bone mass to the extent that one could use this regulation to cure – at least in rodents – osteoporosis," says [Gerard Karsenty](#), lead author of the study and chair of the Department of Genetics and Development at Columbia University Medical Center.

[Emeran Mayer](#), professor of physiology, psychiatry and biobehavioral sciences at the David Geffen School of Medicine at the University of California, Los Angeles (U.C.L.A.) is currently researching how the **trillions of bacteria in the gut “communicate” with enteric nervous system cells** (which they [greatly outnumber](#)). His work with the gut's nervous system has led him to think that in coming years psychiatry will need to expand to treat the second brain as well.

It is now known that a balanced gut brain in connection with the big brain in our skulls partly determines our mental state and plays key roles in certain diseases throughout the body. Therefore, bowel ecology is essential for a healthy life.

Given the pivotal role of our **GI ecology** in health and illness it is imperative to be able to **accurately assess** this important parameter of health. Maintaining balanced ecology in the intestinal tract is extremely important for efficient detoxification and nutritional balance as well as overall mental well being.

Examining **symptoms alone** can often be complex and misleading and **do not always reveal** this bodily condition. Also, symptoms are often the last thing to appear after long-standing, chronic imbalance. It is **therefore incumbent upon us** to have at our disposal a means of accurately detecting, monitoring, and addressing gastrointestinal ecologic balance.

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