LABRIX Newsletter

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Neurotransmitters... The basics

Neurotransmitters are chemical messengers that regulate many physical and emotional processes including movement, stress response, cognition, emotions, energy, cravings, pain and more. Functioning primarily in the central nervous system (CNS), neurotransmitters facilitate communication between the brain and the body's glands, organs and muscles. Inadequate neurotransmitter function disrupts signals to target tissues and has a profound influence on overall health and well-being. In fact, imbalances in certain neurotransmitters are associated with many of the prevalent symptoms and conditions seen in doctors' offices today including:

- Mood disorders: depression, anxiety
- Adrenal dysfunction: fatigue, insomnia
- Loss of mental focus: ADD, ADHD, cognitive fog
- Addiction and dependency
- Hormonal imbalances: E2 dominance, E2 deficiency, low androgens
- Loss of appetite control: obesity and insulin resistance

When functioning properly, the neurotransmission system has natural checks and balances in the form of excitatory and inhibitory neurotransmitters. Though there are many neurotransmitters found in the body, there are six in particular that play significant roles in primary symptomatic conditions.

- **Serotonin:** involved in the regulation of sleep, mood, appetite and aggression.
- **GABA:** the major inhibitory neurotransmitter in the CNS, GABA is important for balancing the excitatory actions of other neurotransmitters.
- **Dopamine:** largely responsible for regulating the pleasure/reward pathway, memory and motor control.
- **Norepinephrine:** involved in a wide variety of actions including attention and focus, regulating heart rate, affecting blood flow, and suppressing inflammation.
- **Epinephrine:** much like norepinephrine, this excitatory neurotransmitter helps regulate muscle contraction, heart rate, glycogen breakdown, blood pressure and more, and is heavily involved in the stress response.
- **Glutamate:** involved in most aspects of normal brain function including cognition, memory and learning, although high levels of glutamate can cause excitotoxicity, a process where nerve cells are damaged by excessive stimulation.

Neurotransmitter imbalances can be easily identified with a single, noninvasive urine sample. Testing provides a tool to understand each patient's specific neuroendocrine imbalances, which can be corrected with targeted nutritional therapy, diet, and lifestyle interventions.

Want to learn more? Please join us for our upcoming free webinar "Neurotransmitter Primer" on Thursday, August 22nd at 10am PST. Click here to register.

Resources

1. Bear MF, Connors BW, Paradiso MA. Neuroscience: Exploring the Brain, second edition

Upcoming **events**

Labrix Advanced Workshop
February 1-2, 2014
Here

Neurotransmitter Primer Webinar
August 22, 2013 at 10am PST
Register Here