

HEALTH ADVISORY

Neurotransmitter Testing

Depressed? Anxious? Don't sleep well? These common symptoms result from imbalances in the complex chemical messenger system of the brain. Serotonin, dopamine, GABA, and glutamate are examples of chemical messengers, called neurotransmitters, that are responsible for making us feel happy, relaxed, and able to get a good night's rest. Stress, whether mental, physical, or emotional, throws off the delicate balance of neurotransmitters. Disruption in this balance can ultimately lead to mood disorders, panic attacks, and insomnia.

Thankfully, advances in medical science now allow us to measure these imbalances through neurotransmitter testing. With this information, targeted treatment regimens can restore optimal function to the brain and drive away the symptoms of neurotransmitter imbalance. Neurotransmitter testing is a non-invasive, at-home urine collection. A simple morning urine collection is all that is needed. The lab report then guides the creation of a customized treatment program designed to balance the chemical messengers of the brain.

Food Sensitivity Testing

Are foods making you ill? It's hard to imagine that the food that fuels our bodies can also be the source of health concerns. The fact is that our bodies do react negatively to some food. Symptoms can range from severe anaphylactic shock (in the case of peanut allergy) to low-grade, persistent headaches and chronic fatigue. Food sensitivity is the general term given to a specific type of reactions that are driven by disruptions in your GI system and an overactive immune system. Unfortunately, it may not always be obvious if foods are causing symptoms. And if foods are causing symptoms, it may not be obvious *which* foods are at the root of the problem.

Thankfully, there's a solution to both of these conundrums, it's called food sensitivity testing. Food sensitivity testing is a simple blood test that can detect immune reactions to various foods. Test panels include from 22 to 154 of the most common dietary offenders. Lab reports contain a number of useful insights regarding GI and immune function- The test will identify which foods are reactive as well as the intensity of the reaction. Additionally, testing can provide information about "gastrointestinal permeability", a measure of how likely undigested food particles are crossing from your intestines into blood circulation. Food sensitivity testing lays the foundation for a dietary and supplement program designed to restore optimal function to your GI system and cool down an overactive immune system. Truly

individualized medicine, this program helps you understand which foods to avoid and which to embrace to restore optimal health.

Cytokine analysis

Inflammation has been labeled as the “silent killer”. It has been estimated that 50% or more of the population is experiencing some degree of inflammation. Classically recognized by localized pain, swelling, redness, and fever, acute inflammation is an essential function of the immune system to help the body heal from wounds and infections. There’s another type of inflammation, chronic inflammation, that can be harder to detect and far more damaging over the long term. Persistent infections, food sensitivities, metal toxicity, and obesity are just a few examples of drivers of chronic inflammation. These stressors cause the immune system to produce chemical messengers, called pro-inflammatory cytokines, that not only help the body deal with the stressor but also have negative effects on other body systems. Pro-inflammatory cytokines affect mood, sleep, digestion, and may other important functions in the body. Chronic inflammation can be a major roadblock to well-being.

While you may not know that chronic inflammation is affecting your health, there are tools that can detect it. Through a blood draw and a laboratory test called cytokine testing, the levels of pro-inflammatory cytokines can be accurately measured. With this information, it can be determined if chronic inflammation is contributing to your health concerns. Recognizing that an overactive immune system is driving symptoms, further testing can identify the root cause of the inflammation and various anti-inflammatory supplements and foods can be recommended to alleviate symptoms.

NK Cell Activity

Your immune system is the body’s natural defense mechanism. This complex internal army deploys many different types of weapons to ward off offenders, including bacteria, viruses, fungi, and parasites. The immune system is also responsible for “homeland defense”, keeping an eye on the body’s own rogue cells that run amuck. Cancer can be generally described as a group of rogue cells that don’t play by the rules. By avoiding the immune system, cancer cells divide rapidly, take over various systems, and lead to life-threatening health concerns. We depend on an optimally functioning immune system to help prevent and fight cancer. A key player of the immune system that is responsible for attacking cancerous cells is called the natural killer cell. Also referred to as an “NK cell”, this specialized immune soldier scours the body, searching for virus-infected and cancerous cells. Obviously, we want plenty of these cells working at their best. Because we are all unique and our immune systems are not the same, it’s hard to know if there are adequate numbers of NK cells and if they are functioning optimally. Past and current infections and other stressors can affect the number and quality of NK cells. Therefore, it’s important to test for NK cells. A NK cell test can be performed

as a preventative measure or during a treatment protocol to assess how well NK cells are functioning.

T & B Cell Function

Your immune system is the body's natural defense mechanism. This complex internal army deploys many different types of weapons to ward off offenders, including bacteria, viruses, fungi, and parasites. There are two classes of "soldiers" that are especially important when it comes to ridding the body of infections and other immune stressors. "T cells" and "B cells" are the snipers of the immune system, trained to hone in on specific targets and remove them from the body. In a healthy body, we can trust that our T & B cells are doing a good job of protecting our bodies. They silently work in the background, often times we don't even know they are there. In some people, however, these immune defenders are not performing their job adequately. A tired, burnt out set of T and B cells can leave us more susceptible to repeated and chronic infections. Are you the type of person that seems to catch every cold or seems to always be sick? It is possible the soldiers of your immune system aren't performing up to par. Consider asking to have your immune system tested. Through advances in laboratory science, we can now how many immune soldiers are present and how well they are functioning. With this information, suggestions for improving the function of your immune system can be made.

Glutathione

Our bodies are under constant attack from chemicals in the environment as well as chemicals produced by our bodies as natural by-products of metabolism. Left unchecked, these chemicals can cause reactions that damage our internal machinery, a process called "oxidative stress". Thankfully, the body has a system for neutralizing these damaging chemicals, also referred to as "free radicals". Antioxidants are chemicals found in the diet and produced by our body that disarm free radicals. One of the most important antioxidants in the human body is called glutathione. This chemical is the primary workhorse responsible for detoxifying the body. Without adequate levels of glutathione, toxins and free radicals can accumulate over time, aging the body and leading to symptoms of toxicity. How do you know if your body has enough glutathione? A simple blood test can be performed that measures the level of glutathione in your body. If the test shows a deficiency, glutathione and other antioxidants and detoxifiers can be recommended.

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