

The Immune System

Two major aspects of healthy immune function are mucosal and humoral immunity. The mucosal immune system consists of the lining tissues of the body that defends us against infectious organisms such as bacteria, virus, yeast, parasites and food antigens. The mucosal immune system also protects us from the entry of harmful toxins from chemicals and heavy metals. Our humoral, or blood immunity, represents the ability of immune cells in the blood to fight and neutralize harmful agents.

These two basic functions of the immune system can be easily measured using Functional Diagnostic lab tests. The strength of our mucosal barrier function, or our mucosal immunity can be assessed with the salivary mucosal barrier screen test. The humoral immune system's reaction to candida can be measured by the Candida antibodies/DNA panel. Both mucosal and humoral immunity are required for our body's ability to fight infections and handle food antigens.

Symptoms of suppressed mucosal immunity include chronic sinus infections or sinus congestion, susceptibility to colds and flus, intestinal upset, food allergies and environmental allergies to pollens and animals. Suppressed humoral immunity is a more advanced condition that results from mucosal barrier dysfunction. This condition is common in people with chronic health problems such as chronic fatigue, Fibromyalgia, depression and food reactions.

Further immune system function can be measured by testing antibodies to gluten, milk dairy, soy, corn and rice. Food reactions are the most frequent hidden cause of immune system problems. Genetic, autoimmune conditions such as gluten intolerance affect millions of Americans. Lactose intolerance and cow's milk dairy allergies are a leading cause of sinus problems and excessive mucous production. Corn and soy allergies are also increasingly common.

Salivary testing also detects the level of secretory immunoglobulin A, referred to as 'SIgA', a vital, if long unrecognized component of the immune system.

In a healthy body, SIgA protects us from opportunistic infections (e.g., parasites, bacteria, yeast, virus) and reactions to foods. SIgA is a thin, healthy, mucous-like substance that provides a physical barrier of defense in all the lining tissues of the body. SIgA defense is found in the lining of the gastrointestinal tract, respiratory tract, sinus passages, throat, mouth, vaginal tract and urogenital system. When SIgA is depressed, we become susceptible to a wide range of infectious organisms, environmental allergens such as pollens and molds, and can become reactive to the very foods we eat.

Stress and Immune Function

Cortisol, the "stress hormone," directs the production of special immune cells called immunocytes which produce SIgA, our first line immune defense. If cortisol values are abnormal the ability of immune cells to produce adequate SIgA is compromised. This is one reason we get sick so easily when we are stressed. Simply put, prolonged stress results in adrenal exhaustion and depressed first line immune defense opening the door for opportunistic infections.

Physiological Effects of Stress

Repair (Anabolic)

The repair/breakdown or anabolic/catabolic dynamic is one of the most important health principles. Depending on our physical and emotional health we are at all times shifting between a repair (anabolic) or breakdown (catabolic) state. Being in an anabolic state means you are rebuilding, repairing, literally re-constructing your body's tissues. Being in a repair state is like



renovating a house by painting, landscaping and replacing a leaky roof. Anabolic refers to your immune system's rebuilding processes. When you are anabolic your body is in a state of constant regeneration, repairing blood vessels and heart tissue, rebuilding old bone and even destroying cancerous cells.

Breakdown (Catabolic)

The opposite process, a breakdown state, is referred to as a catabolic state. The word catabolic is from the same Greek root as the word cataclysm, meaning disaster. It is a well-chosen term since too much time spent in a catabolic state has disastrous effects on your health. This breakdown or destruction phase occurs when your body is operating under stressful conditions and isn't able to repair itself adequately. Under catabolic conditions we breakdown our own muscle, our own organs and our own bone. This breakdown ultimately leads to degenerative diseases.

We maintain a strong immune system when our bodies spend more time in repairing than breaking down. A healthy immune system prevents the development of many chronic degenerative diseases. For example, we have cancer cells that grow in us each day and it's our immune system's job to destroy those cells so that tumors don't develop. Our blood vessels and heart require constant renewal to prevent the plaquing that causes cardiovascular disease. Our bodies are constantly breaking down and repairing bone and joint tissue; if this breakdown process is blocked, osteoporosis and arthritis occur. Prolonged immune system stress can lead the body to attack itself resulting in autoimmune diseases such as lupus, multiple sclerosis and rheumatoid arthritis.

Your health status, whether you are predominantly in a repair state or breakdown state, can be measured by a variety of lab tests. This information allows you to address chronic degenerative diseases in their earliest stages, long before a pathological condition has developed.

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