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INTEGRATIVE HEALTH

The Foundation of Health: The Three Body Systems

- 1) **Adrenals**
- 2) **Digestion**
- 3) **Detoxification**

The Hormonal System

Your complete health analysis begins with assessment of the hormonal system provided by the Functional Adrenal Stress Profile.

Stress Hormone Lab Assessments

The first step in assessing your hormonal system's condition is to measure the functioning of your adrenal glands with the Functional Adrenal Stress Profile test. The urine samples you submit to the laboratory are put through sophisticated hormonal assays that measure the levels of cortisol and DHEA hormones over a 24-hour period.

This test analyzes how well your body is managing stress.

Causes of Stress

The Functional Adrenal Stress Profile measures adrenal stress caused by lifestyle issues such as working long hours, poor eating habits (particularly imbalance blood sugar and lack of protein), lack of exercise, or lack of rest. Adrenal stress can also be caused by internal organ dysfunction such as poor digestion or inadequate detoxification ability. When the sum total of all your stresses reaches a critical threshold, the adrenals react in a predictable pattern.

Symptoms of Stress

The most commonly experienced symptoms of adrenal stress include:

- **fatigue**

- **depression**
- **inability to lose weight**
- **sweet cravings**
- **decreased sex drive**
- **insomnia**
- **poor memory**
- **anxiety**
- **PMS**
- **weakened immune response**
- **recurrent infections**
- **unexplained nervousness or irritability**
- **joint or muscle pain.**

As you experience these external symptoms, profound physiological changes are taking place inside your body.

Three Stages of Burnout:

Stage 1 - Stress Overload

Whatever the source of stress, your body's initial reaction is the same: the adrenal glands make more of the stress hormones cortisol and DHEA. This first stage of hormonal maladaptation is characterized by overactivity of the adrenal glands. Normally, when the stress dissipates, the glands have time to recondition and prepare for the next stressful event. However, if your stress levels remain chronically high, your body will remain locked in this first stage of adrenal stress. If your stress hormone levels remain elevated for extended periods of time, your body's ability to recover can be reduced, and the ability of your adrenals to make cortisol and DHEA can be compromised.

Another way to look at this is to think of your adrenal reserve as a savings account. If you continually withdraw money from savings and don't replace it, you are eventually unable to recover financially.

Fatigue and other adrenal symptoms are signs that your body's reserve has been overdrawn and your adrenals are becoming exhausted. If the stress continues, the high levels of cortisol and DHEA begin to drop. As the high levels of these hormones can no longer be sustained, a person enters into stage two of adrenal exhaustion.

People in stage 1 adrenal fatigue may not actually feel “fatigued”yet!

Stage 2 - Fatigue

Some individuals have genetically strong adrenal function and can maintain health under high levels of stress for many years. Others may enter into stage two more quickly.

Eventually, if we continue to experience excess stress, we enter into stage two of adrenal exhaustion. Under chronic stress conditions the adrenals eventually "burn out." At this point adrenal function become "fatigued" and can no longer sustain an adequate response to stress. This condition ultimately leads to stage three Adrenal fatigue if not addressed.

People in Stage 2 adrenal fatigue may feel tired, wired, or a combination of both, at different times of day, or, under stress. In general, most people experience less bandwidth for responding to day to day stressors and work load.

Stage 3 - Exhaustion

In stage three of adrenal maladaptation the body has been depleted of its ability to produce cortisol and DHEA in sufficient amounts and now it becomes more and more difficult for the body to recover.

Constant fatigue and low-level depression can appear in otherwise emotionally healthy people because cortisol and DHEA help maintain mood, emotional stability and energy levels.

As cortisol and DHEA levels are depressed, people experience depressed mental function. Brain function suffers as these hormones are depleted. Both poor memory and mental confusion can be a direct result of adrenal hormone depletion.

Stress and Sex Hormone Production and Sex Drive

Because all hormone production is linked by biochemical pathways, cortisol and DHEA depletion impacts the female hormones progesterone and estrogen, as well as the predominant male hormone, testosterone. In both men and women hormonal symptoms such as **mood swings, irritability, sweet cravings, lowered sex drive, and headaches** can be related to the failure of the adrenals to adapt to stress. Female hormone symptoms such as menstrual cramping, infertility, night sweats and hot flashes can also be adrenal related. Many women feel they are on an emotional roller coaster with their female hormones, yet rarely is the role the adrenals play in female hormones explored. Testosterone levels in men also suffer as a result of weak adrenal output. Since sex hormone levels drop as cortisol and DHEA levels drop, sex drive diminishes in both men and women. And no one likes that!

Bone Loss, Pain and Inflammation

When cortisol levels are abnormal due to chronic stress, bone loss can occur. This is because excessive cortisol blocks mineral absorption.

Many people experience increased neck, back and joint pain from imbalances in cortisol.

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.

People who are in a catabolic state need radically higher levels of protein to maintain and repair body tissue.

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.

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.

The Digestive System

Importance of Healthy Digestion

The foundation of good health lies in proper digestive function. All other health factors can be undermined if you don't digest and absorb nutrients well. Assimilation of vitamins, minerals, proteins and essential fatty acids from the foods you eat and the supplements you take is required for optimum health. Any therapeutic program you may use will be of limited value without good digestive function.

Digestive Function: Lab Testing

The first step is to take a look at how well your body is digesting. The second step, if a problem is detected, is to determine why your body is not digesting well. Several different types of lab tests are available to assess the function of different organs of the digestive system.

Digestive Enzymes

The inability to digest protein may reflect a deficiency of stomach acid and digestive enzymes. Without sufficient enzymes your body cannot break down the food you eat for assimilation. Low stomach acid and low digestive enzymes are common problems due to our poor diets and high stress levels.

Effects of Low Enzymes

If you have low levels of digestive enzymes, the food you eat is not completely utilized. Any foods you don't digest because of insufficient enzymes become toxic to your body.

These partially digested foods provide a substrate or fuel supply for harmful microorganisms like yeast, bacteria, and parasites. Health-sustaining enzymes are abundant in raw and lightly cooked vegetables and fruits, and these should be part of your daily food intake.

Replenishing Enzymes

If you have depleted your reserve of digestive enzymes through poor eating habits you

can support your digestion with digestive enzymes until your reserve is built back up. The right dietary supplements will help keep you in a rebuilding state. Supplemental enzymes will help you to properly digest protein, fats, and carbohydrates, which are essential to maintaining stable blood sugar and overall health.

Dysbiosis and Hidden Digestive Problems

A positive finding on a Diagnostic Stool Test can also point to dysbiosis, an imbalance in the healthy organisms that inhabit the intestinal tract. **Dysbiosis can be caused by parasitic infections, bacterial overgrowth, or invasive yeast often referred to as Candida.**

Parasites

Many people think of parasites as a problem that only occurs when traveling abroad. However, through recent improvements in diagnostic testing methods, doctors are now discovering high levels of parasite infections in the United States. This can occur when you eat at restaurants where the staff has poor hygiene, or when you eat from salad bars and buffets where food is left sitting out, or from swimming in pools, lakes, oceans or streams. Handling money, shaking hands with people and using public restrooms are all ways we are exposed to potential parasitic infections.

Leaky Gut Syndrome

Another common manifestation of digestive stress is "Leaky Gut Syndrome," in which the integrity of the intestinal lining is compromised and is no longer as discerning as it should be between what is absorbed into the blood stream and what is kept out of the blood stream. Therefore, molecules "leak" into the blood that should not be present and are attacked by our immune system, causing inflammation and tissue damage. When food antigens "leak" into our blood stream, the immune system thinks they are foreign invaders and mounts an immune response that we experience as an allergic reaction.

Yeast and bacteria can also "leak" into the blood stream and cause significant immune system activity as well as overburden our detoxification systems.

Gluten and Dairy

Food sensitivities are a common cause of hidden, or subclinical, inflammation in the gastrointestinal tract. For example, some people are sensitive to grains containing gluten such as wheat, barley and rye. Others react to lactose found in milk and dairy products; many people react poorly to soy. These types of hidden food reactions are frequently found in people with chronic health problems. **Advanced food sensitivity testing allows you to determine if food related problems are a significant factor in your overall health picture.**

The third major body system is based on both anti-oxidant protection and liver detoxification. These body functions are the physiological mechanisms that protect you

from free radical damage and chemical toxicity. **The initial assessment for the detoxification system is the Organix Metabolic Assessment. Further testing includes determining heavy metal burdens from lead, mercury, arsenic, cadmium and other toxic metals as well as chemical sensitivities.**

The Metabolic Assessment evaluates your level of free radical damage and oxidative Stress, and assesses your liver's ability to detoxify and eliminate harmful substances. Certain values being elevated or depressed lets us know that you are slow to eliminate toxins and need support for the specific liver detoxification pathways. **Inadequate detoxification leads to allergies, asthma, joint pain, skin problems, headaches, inability to concentrate, and alcohol intolerance.**

The Detoxifying Role of the Liver

Why is your liver so important? One major role of the liver is to function much like a filter. If your body has to handle too many toxins, or waste products, the filter become clogged and ineffective. If toxins are not eliminated they recirculate through your blood and affect many organ functions. Toxins can affect nervous system and mental function, leading to fatigue, depression or anxiety. This build up of toxins can cause allergies and skin reactions, joint and muscle pain, or brain-fog. Inadequate detoxification leads to accelerated aging and promotes the onset of degenerative diseases.

Sources of Toxins

Our bodies must deal with toxins from many sources. **One major source of toxic exposure is through the digestive tract, generated by parasites, yeast or bacterial organisms that may be residing there.** High fat diets, alcohol, caffeine, sugar, artificial sweetener consumption and the use of medications also contribute to the total burden placed on the liver. Hormones and antibiotics fed to animals, preservatives and dyes used in food processing can all cause serious symptoms and side effects. Heavy metal toxicity from dental fillings, contaminated food and water and other environmental exposure also add to the total toxic load on the body.

Most tap water in the United States comes from municipal water systems that are the repositories of millions of tons of chemicals, waste products, fertilizers, herbicides and pesticides from water run off. Much of this finds its way into our food supply.

It is impossible to completely avoid exposure to the environmental pollutants (car exhaust, cigarette smoke and industrial waste) that have accumulated in our air, water, food and soil. Constant exposure to toxic chemicals in our food, air and water has been demonstrated to lower our resistance to disease and cause multiple nutritional deficiencies and altered liver enzyme function. Birth defects, infertility, neurological

disorders, hyperactivity, attention deficit disorder and other learning and behavioral disorders have been linked to excessive chemical exposure.

Eliminating Toxic Exposures

Despite all the work it has to do everyday, the liver has an amazing ability to regenerate.

It's the only human organ that can re-grow if a section of it is cut away.

If your toxic exposure level is high and your ability to eliminate these poisons is compromised, nutritional supplementation can reverse a dangerous situation. If your ability to detoxify is strong, then simple avoidance of obvious sources of toxic exposure will help keep it that way. Methods of avoidance include using non-toxic cleaning agents that are safe and effective, eating organic foods, avoiding excessive alcohol and caffeine, avoiding second hand cigarette smoke and avoiding any unnecessary use of over the counter medications.

Detoxification Lab Assessments

Measuring Free Radical Activity

Your Organic Acids test includes a measurement of your level of free radicals and lets you know the level at which you need anti-oxidant support. Not everyone needs antioxidants

and taking them if they are not needed can cause muscle weakness and fatigue.

That is why appropriate testing before supplementation is so critical. If your tests demonstrate a need for anti-oxidant support, you can supplement and then retest at a future date to evaluate the success of your program.

Measuring Liver Detoxification Pathways

The Organic Acids profile has 46 test parameters in all which in total create an excellent tool for over all assessment that includes energy production, fat and carb metabolism, B vitamins, brain chemistry function, and many other factors.

To your best health and life-long vitality,

Brie Wieselmann

