

Understanding Your Adrenals

Stress can undermine your health. The connection between stress and high blood pressure, heart disease and many digestive problems is well-established in medical research. Stress creates hormonal and blood sugar changes, causes the body to excrete nutrients and adversely affects the immune system.

The adrenal glands are directly affected by stress. They are responsible for the “fight or flight” response. Hans Selye, MD, conducted experiments creating stress in rats. The rats were made to tread water with their legs tied until they became exhausted and died. Dr. Selye analyzed the rats at various stages of the experiment and dissected their adrenal glands. He found that the adrenal glands responded to stress in three distinct stages. In the initial stage, the adrenal glands enlarged and the blood supply to them increased. As the stress continued, the glands began to shrink. Eventually, if the stress continued long enough, the glands reached the third stage of adrenal exhaustion. The adrenal glands produce certain hormones in response to stress. In a stressful situation, they raise blood pressure, transfer blood from the intestines to the extremities, increase the heart rate, suppress the immune system and increase the blood’s clotting ability.

This response is meant to be short-lived. When primitive man walked through the forest, he’d see a wild animal. His heart rate would increase, his pupils would dilate, his blood would go out of his digestive system and into his arms and legs, his blood clotting ability would improve, he would become more aware and his blood pressure would rise. At that point he’d either pick up a stick and try to fight the animal or run. The physiological changes brought on by the adrenal glands would make the body more efficient at doing either of those things. This is called the fight or flight response.

If he survived the ordeal, chances are it would be a while before such a strain was put on the adrenal glands and the rest of the body again. He would have an opportunity to relax, eat nuts and berries (and a little meat from the wild animal, if he was lucky). His adrenal glands would have a chance to recover.

Many people in modern society do not have the luxury of a recovery period for their overworked adrenal glands. The changes caused by the overproduction of adrenal hormones stay with them. The stimulation of the adrenal glands compromises immune function, so people under constant stress will tend to catch colds and have other immune system problems, like allergies. Stress causes many digestive problems such as indigestion, colitis and irritable bowel syndrome. Blood flow to the digestive tract is decreased because adrenal hormones also cause an increase in the blood clotting ability, so prolonged stress can lead to the formation of arterial plaque and heart disease.

Worrying makes the adrenal glands work. Relaxing and thinking peaceful thoughts enables them to rest and heal. That is why yoga and meditation are so good for you. You go a long way in preserving your health and energy if you do not fret about things over which you have no control. It’s the amount of worry and not necessarily the size of the problem that stresses your adrenal glands. If you worry a lot about little

problems, you do as much damage to your adrenal glands as someone who really has a lot of stress. If you can control your worrying when under stress, you minimize the damage stress does to your health. A wise man once said, "worry is interest paid in advance on money you haven't borrowed yet."

Dr. Selye described the progression of stress on the adrenal glands as General Adaptation Syndrome. The first stage is called the alarm reaction. This is when someone (with healthy adrenal glands) can perform amazingly well when the need arises. The primitive man, seeing the saber tooth tiger, was able to run faster than he ever dreamed possible during the alarm reaction. If the stress continues, the body moves into the resistance stage, during which the adrenal glands become enlarged. In this stage, a person can feel anxious, have cold, clammy hands; a rapid pulse, and a decreased appetite, but hasn't begun to feel any of the more serious symptoms of the exhaustion stage. During the exhaustion stage the adrenal glands begin to fail to meet the demands placed upon them. During this stage, the individual begins to have a variety of symptoms including fatigue, digestive problems, obesity, depression, dizziness, fainting, allergies and many other problems.

People with weak adrenal glands frequently crave coffee and sugar, as well as salt. Sugar and caffeine stimulate the adrenal glands. It's as if your adrenal glands are two horses towing a wagon load of bricks up a mountain and sugar, or caffeine, act as the whip you use to get the horses to keep trying. What they need to get to the top of the mountain is nourishment and a rest period.

To effectively treat the adrenal glands, you must eliminate as much stress from your life as possible. Emotional stress is the kind of stress most people think of when stress is mentioned, but there are many different kinds of stress. Thermal stress results from being exposed to extremes of temperature; physical stress from heavy physical work, poor posture, structural misalignments, lack of sleep and being overweight; and chemical stress from ingestion of food additives, exposure to pollutants and consumption of sugar and alcohol. Changes in blood sugar are also a form of chemical stress. Eating frequent, small meals is often very helpful, since people suffering from adrenal fatigue are often hypoglycemic (having low blood sugar).

Situations are not always controllable, but stress and how you react to the situation is. Stress is cumulative. Emotional, structural, and chemical stress all affect the body the same way. Your adrenal glands do not know the difference between failing an exam, treading water, or excessive sugar consumption. Furthermore, if you consume excess sugar because you failed an exam, it will add to the level of stress you experience.

If you reduce the stress that you can control and change how you respond, stressful situations will not have as much of a physical effect on you. For instance, eating frequent meals and avoiding sugar will reduce stress on the adrenal glands. So, even if you can't do anything about your in-laws coming to spend the summer, you can reduce your stress by controlling your diet. Also, how you think of the stress will make a difference in the health of your adrenal glands. Your mother-in-law's handy tips on how you should raise your kids, clean your house, or her penchant for eating everything that isn't nailed down (without offering to pay for groceries), won't stress your adrenal glands if you don't focus on it.

If you can't change your work situation, then improve your diet and get plenty of rest. Change how you think about your job situation. Focus on the positive; you do have a job, you do eat regular meals when most of the world doesn't. Just do the best you can and think of the things you can't control in positive terms.

As Naturopathic Doctors, we are always concerned about the health of your adrenal glands. We will do our best to support you with lifestyle suggestions, nutritional advice and various remedies so you can feel your best!!

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