

The Necessity of Stress Reduction

We keep hearing about *the cascading effects of stress* causing physical, emotional and neurological problems. What does this mean? We hear it has something to do with adrenal glands and fight/flight.

Answer: When stress occurs, whether it is physical, mental, or emotional, parts of the brain are triggered that enable chemicals to be released that trigger still other chemical responses that eventually affect the adrenal glands. The adrenals produce chemicals that are responsible for your survival response. Your body registers stress as a threat to your life. The chemicals speed up your metabolism so you can take whatever action is necessary to survive. This action by your adrenals under stress makes it possible to perform super human actions in emergencies such as lifting very heavy objects off of injured people.

However, when the adrenals are constantly being triggered by the many stress events that you can encounter on a daily basis, they become over-worked and various organ systems begin to malfunction. This leads to disease, psychopathology and eventually...severe organ dysfunction. How and where in your body, the results of stress affect you, depends on your inherited genetic and constitutional make-up and can also be influenced by environmental factors.

One of the chemicals that the adrenals produce is cortisol. Many people have heard of it in the TV commercials for weight control products but cortisol effects don't end there. As the level and frequency of stress increase and more and more cortisol is produced, the body eventually starts to lose its ability to handle the stress. This causes a problem with the systems of the body that regulate basic functions such as sleep and appetite. The longer and more frequent the stress, the less able the body is to produce enough cortisol.

In order to provide enough hormone material to produce cortisol, the body cannibalizes the sex hormones such as estrogen, progesterone, and testosterone. This leads to sexual dysfunction in men and women such as low sex drive, failure to achieve an erection, PMS, or even the ability to get pregnant. The immune system cannot respond as it should; therefore, allergies and chronic pain as well as more serious conditions can develop. Finally, the adrenals become "exhausted" and one or more systems in the body may break down, resulting in disease of some kind and the disease may be mental as well as physical.

As this process is occurring with the adrenals, the chemical triggers in the brain continue to be released. These chemicals interact with the neurotransmitters that are the chemical messengers in the brain that carry the information that controls body functions. Diet, exposure to electrical and magnetic currents, chemicals, recreational and prescription drugs, heavy metals, stress, etc., all help to create imbalances in the neurotransmitters. This can result in ADD/ADHD, depression, obsessive/compulsive behavior, bi-polar disorder, anxiety, poor memory, aggression, addictions, schizophrenia, insomnia, migraines, hormone imbalances, decreased mental abilities, allergic reactions, heart and kidney dysfunction, and the list goes on.

As you can see, there are overlaps with cortisol and the neurotransmitters. The adrenals also produce adrenaline. This chemical has two roles, as a hormone and a neurotransmitter. The body makes neurotransmitters from amino acids which are chemicals that come from protein in the diet when it is digested. That's why a healthy diet with sufficient amounts of protein and good digestion are very important.

After reading the section above regarding the cascading effects of stress, is it easier to see how Post-Traumatic Stress Disorder can easily be misdiagnosed as ADHD? The symptoms

might be similar, but what is going on in the brain and body is quite different. With post-traumatic stress disorder, the child is operating out of the hind or fight/flight part of the brain. The cortisol and adrenaline are pumping, the pupils are dilated, scanning the environment for danger, the heart is beating hard and fast, the child is hyper vigilant and maybe bouncing from one thing to the next unable to sit still. Imagine what a class II stimulant such as Ritalin can do to post-traumatic stress disorder when ADHD is the misdiagnosis. That is why it is so important to know which neuro-transmitters are out of balance instead of just guessing.