

# Adrenal Glands

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*Working more than ever, multitasking to make ends meet, no sleep, and stressed out are common complaints a lot of people have on a daily basis. In a new survey by the American Psychological Association, nearly 75% of Americans say they are stressed to the max over money, work, and the economy. Being stressed out takes a toll on your body and can affect it in many ways. Let's take a look on how the body responds.*

The adrenal glands are triangular endocrine glands that sit on top of the kidneys. They release hormones in time of stress, aide in production of energy, and contribute toward balance of electrolytes and fluids. The glands are divided into 2 regions called the cortex and the medulla.

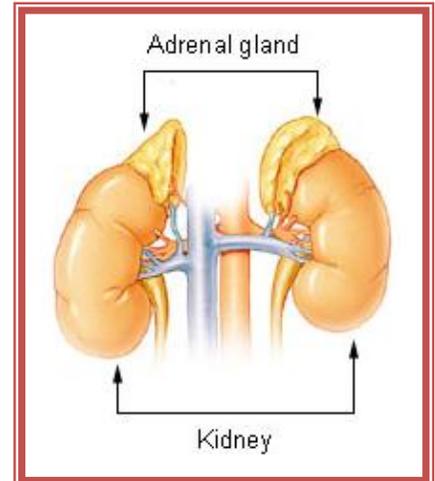
The outer cortex of the adrenal gland produces steroid hormones such as cortisol, aldosterone, and androgens. Cortisol is released in response to stress to regulate blood sugar levels and metabolism. In excess it can cause bone loss, diminish thyroid activity, and suppress other hormones. Aldosterone helps regulate blood pressure by working with the kidneys. In excess, aldosterone can be a cardiovascular risk. In humans, when aldosterone antagonists are administered to patients with chronic heart failure, mortality decreases.<sup>1</sup> Androgens play a role in male sex characteristics and are a precursor to estrogen.

The inner medulla produces epinephrine and norepinephrine which are hormones of the sympathetic nervous system responsible for our "flight or fight" reactions. When the sympathetic nervous system takes over, our heart rate increases, pupils will dilate, blood pressure rises, and motility of the intestines reduce.

What is adrenal insufficiency?

Adrenal insufficiency, also known as Addison's disease, is caused by inadequate production of hormones made by the adrenals. The cortisol and aldosterone will be secreted due to destruction of the cortex. It can be diagnosed by an ACTH (adrenocorticotropic) stimulation blood test. This test recognizes an underproduction or overproduction of hormone levels at the top and bottom 2% of a bell curve. Symptoms of adrenal insufficiency are muscle weakness, fatigue, low blood pressure, irritability, weight loss, and darkening of the skin.

Since Tuberculosis cases have decreased since the middle of the twentieth century, the major cause of Addison's disease results from an autoimmune reaction which can take months to years to destroy the adrenals.<sup>2</sup> Fortunately, only 4 per 100,000 people develop this, which is due to autoimmune disease 80% of the time.<sup>3</sup> With routine care and physician visits people with Addison's disease have a normal life expectancy.



What is adrenal fatigue?

Adrenal fatigue is a collection of non-specific symptoms, such as body aches, fatigue, nervousness, sleep disturbance, abnormal blood sugars, and digestive problems. The term is popular in health books and magazines; however it is not an acceptable medical diagnosis because there is no test for it.<sup>4</sup> In fact, adrenal glands can be functioning 20% below average with your body experiencing symptoms of adrenal fatigue, but the ACTH test won't recognize it.

Many will try to take certain stimulants to feel better, supplement with glandulars or take the latest "adrenal fatigue vitamin of the month" because they feel their symptoms are associated with poorly functioning adrenals. But, how do you know? Fatigue can be a sign of a multitude of disorders including increased coronary risk, liver dysfunction or even simple protein malnutrition. Don't get caught up in treating symptoms. This is not the way to address this issue.

Can you recover from adrenal fatigue?

Your body can overcome chronic stress and feel energized again. A healthy body will handle stress more seamlessly. First of all, always rule out the worst first. As mentioned above, fatigue is a warning sign that there may be something more important going on in your system. Getting a thorough blood work-up and toxic element testing will shed light on dietary changes you need to make, target areas you may need to supplement and help to objectively monitor your progress.

Call today to set up your consultation to get on the road to better health.

In the meantime, try these lifestyle changes to improve energy levels:

- **Take a good multiple vitamin and mineral supplement.** A multiple vitamin isn't a cure all but does help to balance the nutrient density of your diet. Be sure to review our previous newsletters "Choosing a Multiple Vitamin" May 2008 and "Understanding Supplement Labels" December 2010 for more information.
- **Get some rest!** Having problems sleeping and staying asleep? Turn the TV off at least 2 hours before bedtime and read a good book. Also, try a natural sleep aid such as Formula 303 which contains a homeopathic remedy and valerian root. Take 2-4 at bedtime as needed.
- **Exercise** to burn off those stress hormones and help you sleep better at night!
- **Rehydrate!** Dehydration can cause fatigue and headaches. Aim for 1 quart of clean, filtered water per 50lbs of body weight. Don't go over 3 quarts per day regardless of your weight.
- **Maintain blood sugar levels** with a balanced diet and by eating every two hours.
- **Avoid Caffeine** and other stimulants

#### References:

- <sup>1</sup> Catena C, Colussi GL, Nadalini E, et al. Cardiovascular outcomes in patients with primary aldosteronism after treatment. Arch Intern Med. 2008;168:80-85.
- <sup>2</sup> Margulies, Paul M.D. Adrenal Diseases-Addisons Disease. National Adrenal Disease Foundation. 2007
- <sup>3</sup> Wilson, James. "Adrenal Fatigue: The 21<sup>st</sup> century stress syndromes" Smart Publications, p. 7. 2002
- <sup>4</sup> Nippoldt, Todd B., M.D. Is there such a thing as adrenal fatigue? MayoClinic.com. 2009, April 30.

Federal Law requires that we warn you of the following:

1. Your individual health status and any required health care treatments can only be properly addressed by a professional healthcare provider of your choice. Remember: There is no adequate substitution for a personal consultation with your chosen health care provider. Therefore, we encourage you to make your own health care decisions based upon your research and in partnership with a qualified health care professional.

2. The Constitution guarantees you the right to be your own physician and to prescribe for your own health.