Anti-Aging
Discussion on Thyroid and Cortisol Hormones

Everything you do including thoughts, feelings, and emotions, physical growth and maintenance, and childbearing is influenced by hormones. Thus proactively educating yourself about them, being familiar with signs and symptoms of hormonal imbalance, and finally managing them is as crucial as anything else you do for your health and well being. Proper nutrition and exercise are indeed important, but without the critical hormonal balance will do little to thrive. If you are tired or depressed, have difficulty losing weight, diminished libido and/or zest for life, or if you are a woman who has irregular menstrual cycles, then you have symptoms suggestive of hormone imbalance.

There are six critical hormones that are affected as you age: estrogen, progesterone, thyroid hormones, cortisol, testosterone, and human growth hormone. Estrogen is responsible for those sexy, fertile, strong, happy, and voluptuous characteristics of being a woman. Progesterone provides those youthful, cheerful, calming, steady, well-balanced, and fertile features. Thyroid hormones are responsible for regulating all metabolic functions and energy production in the body and brain. Cortisol gives you energy, helps you handle stress, and enables you to be quick and active. Testosterone although considered a "male" hormone is important for woman by providing muscle tone, strong bones, a healthy libido, mood, and energy. Human growth hormone is kind of the master switch hormone regulating the growth and maintenance of essentially all tissues in and of the body.

Thyroid Hormone Imbalance

It is estimated that between 30% to as much as 80% of the population has some degree of low thyroid function (Hypothyroid). Even more unfortunate is the fact that this imbalance, which affects so many aspects of health, is frequently either misdiagnosed, misunderstood, or completely overlooked. Hypothyroidism can be due to a genetic inheritance, menopause/peri-menopause, exposure to certain viruses, iodine deficiency, direct physical trauma to the thyroid gland, head trauma effecting the pituitary, autoimmune disease, or environmental toxins.

<u>Common symptoms of Hypothyroidism include:</u>

- Fatigue
- Accelerated aging
- Weight gain
- Cold dry skin
- Joint and muscle pain (even Fibromyalgia)
- Constipation
- Memory loss
- Brain fog
- Hair thinning/loss

If you have several of these symptoms above you should schedule an appointment with a physician specializing in hormone replacement therapy and optimization to review them and arrange for a comprehensive thyroid evaluation, including a panel of tests.

Your initial lab tests (blood work) should include: thyroid stimulating hormone (TSH), free thyroxine (T4), free tri-iodothyronine (T3), and reverse tri-iodothyronine (rT3) levels. TSH is produced by the pituitary gland and stimulates the thyroid gland to produce T4 and T3 the active thyroid hormones. Insufficient production of any one of these can lead to hypothyroidism. On the other hand reverse T3 is an inactive form of T3 and therefore overproduction of this form of thyroid hormone can cause hypothyroidism as well.

Treatment for Hypothyroidism includes: simply replacing bioidentical T4 and usually T3 hormones in pill form. Because women seem to have a more difficult time converting T4 to T3 which is actually the more active form then T3 replacement is usually necessary too. Armour Thyroid is a bioidentical thyroid replacement medication that is commonly prescribed by specialist because it contains both T4 and T3. This treatment is usually very effective and quickly makes you feel better.

Cortisol Hormone Imbalance

Cortisol is produced by the adrenal glands which sit atop the kidneys. Cortisol is considered the main "stress" hormone and in doing so helps us manage both physical and psychological stress. When cortisol levels rise in response to stressors, we get a boost of energy, our memory works better, and we're more motivated – all positive outcomes. However, when we are bombarded by constant stress our cortisol levels remain high causing negative even toxic effects.

Common signs & symptoms of elevated cortisol levels:

- Depression
- Memory malfunction
- Anxiety
- Fatigue
- Stomach ulcers
- High blood pressure
- Elevated cholesterol
- Weight gain
- Food & alcohol cravings
- Insulin resistance
- Heart disease
- Osteoporosis
- Frequent illnesses

Because cortisol affects other hormones, in women, it can trigger problems such as infrequent ovulation and difficulty getting pregnant by suppressing estrogen and progesterone activity.

The first step in reducing cortisol levels is through proper nutrition and exercise and adequate sleep. Cut back on salt, simple sugars and white flour products, eat more frequent smaller meals (at least four a day), reduce alcohol intake, and exercise at least three times a week for at least 20-30 minutes depending on intensity. When you can't escape the stressors or manage them through diet and exercise, the adrenal glands eventually become fatigued and cortisol levels drop below the threshold necessary to handle stress.

Common signs & symptoms of low cortisol levels:

- Stress intolerance
- Chronic Fatigue Syndrome
- Cold intolerance
- New onset of allergies
- Loss of stamina
- Weight gain (from poor blood sugar regulation)
- Aches and pains including Fibromyalgia
- Prolonged illnesses and common colds
- Alcoholism
- Depression
- Rheumatoid arthritis
- Heart disease
- Insomnia
- Asthma

Again because cortisol affects other hormones, when it is too low it can cause Hypothyroidism because it is necessary for the production and function of thyroid hormones.

Your initial lab tests should include: Although blood, urine, and saliva tests exist, blood testing is still the gold standard. Because cortisol levels are highest in the morning about an hour after awakening then drop sharply for about the next 4-5 hours then very slowly drop throughout the rest of the day, it is recommended to draw blood both first thing in the morning then at 4PM. Adrenal corticotrophin hormone (ACTH) is produced by the pituitary and it stimulates the adrenals to produce cortisol. Testing ACTH too will help your physician determine whether the problem is at the level of the pituitary or the adrenal glands.

Treatment for Low Cortisol (Adrenal Fatigue) includes: again simply and very effectively replacing bioidentical cortisol in pill form. Not only does this replenish the body with the needed hormone but it also relieves the work load on the adrenal glands, giving them time to relax and recover. Exercise and good nutrition should also be maintained to help minimize ongoing stressors in your life.

Question and comments are welcome to Dr. Ryan A. Stanton at ryanstanton_md@yahoo.com or by calling his office 310.278.0077