



GENERAL ACUPUNCTURE

## The Yang of Stress & Fat: Hormones Worth Monitoring in Your Patients

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There are many risks associated with obesity, some even severe enough to lead to death, such as a heart attack or stroke. As a practitioner with clinical expertise you may feel inclined to impart some wisdom, however, this can also be an uncomfortable subject to broach — Dr. Melnyk's discussion on stress and fat may be the starting point you need.

### Stress Hormones

These hormones are prime Yang hormones. Cortisol and adrenaline are major stress Yang hormones. They are crucial to our survival as they trigger our body's fight-or-flight responses to threats. This response results in becoming more alert as well as prepared for a fight by causing the heart to pump more blood to our major muscle groups so we can climb, run, or fight to survive the threat.

Adrenal hormones also result in the constriction of blood vessels, which causes blood flow to speed up. This can make you frightened, jittery, and cause your hands and feet to become cold. Adrenaline can also cause your fat, muscles, and liver to metabolize blood sugar, giving you more energy to combat your threat.



This is why these hormones are known as survival hormones. Further on, we will focus on cortisol and dehydroepiandrosterone (DHEA), a prohormone which is responsible for the balance of cortisol similar to how progesterone is responsible for estrogen balance.

Adrenaline and cortisol share a close relationship. An increase in adrenaline results in an increase of cortisol. While adrenaline produces a short-term response to stress and fades quickly, cortisol remains active for much longer.

When there is an increase in cortisol levels in our body, the recovery time after a surge of adrenaline also increases. The more surges in adrenaline, the more cortisol is produced. Although these hormones function together, we are more focused on cortisol due to its long-term dominance in our bodies.

Besides helping your body achieve peak functional efficiency during times of stress, cortisol also helps maintain blood sugar levels, blood pressure, metabolism, and also serves as an efficient anti-inflammatory agent. It also regulates the fluid balance in your body. The downside to cortisol is that it can have damaging effects, which can alter your hormonal balance which in turn will affect your brain function, general wellbeing, and cause more hormonal symptoms.

Cortisol: Yang within Yang

Cortisol, a Yang or stress hormone is secreted by the outer portions of your adrenals glands. It regulates the metabolism of fats, proteins, and carbohydrates while also playing a major role in fighting infection, immune responses, thinking, maintaining blood sugar balances, as well as several other functions.

In case of excess levels, cortisol can cause several problems like osteoporosis, weight gain or loss, depression, cardiovascular problems, high blood pressure, and several other issues that can affect women's health.

Besides serving as a marker for stress levels, this hormone is essential for the performances of nearly every part of your body. An increase or decrease in cortisol levels can cause a wide range of psychological as well as physical symptoms such as increased appetite, diabetes, weight gain, and depression.

Several scientific studies have shown that abnormal cortisol levels are caused due to the following lifestyle habits: chronic stress, not getting adequate sleep, and unhealthy diets and calorie restrictions. When your body produces high amounts of cortisol, the adrenal glands become too weak to be able to produce all necessary hormones.

This causes your pituitary gland to work overtime, which ultimately results in a domino effect sweeping through your entire endocrine system. This in turn results in your glandular functions becoming impaired and a series of hormonal imbalances. Lack of nutrition, protein deficiency, and chronic stress can cause your adrenal glands to become exhausted and incapable of producing necessary amounts of cortisol.

Abnormal levels of cortisol can cause symptoms like exhaustion, chronic irritability, PMS, and lack of energy. Just like the hormone progesterone balances out the levels of estrogen in the bloodstream, the DHEA plays a vital role in balancing cortisol.

While the DHEA comprises of properties that are more Yang as compared to progesterone and estrogen, it is more of Yin in comparison to cortisol. The DHEA can be touted as a hormone precursor that functions by balancing and neutralizing the negative effects of excess cortisol in the human body. Formulated and secreted by the adrenals, the DHEA can serve as a weak hormone that can also be used to produce both testosterone as well as estrogen.

Studies indicate that the DHEA can be associated with multiple functions such as growth and repair of proteins, building up of muscle mass, production of energy and even reduction of the level of bad cholesterol in the body. In a nutshell, the functions and properties of DHEA can be rightly touted as Yin in nature.

## The Thyroid

Moving over to yet another hormone that plays a critical role in the functioning of the endocrine system, we have the thyroid hormone that is produced by a butterfly shaped gland situated just below the neck region.

The primary function of the thyroid gland is to manage the various cellular operations, and contribute to a healthy growth and development of the human body. The thyroid hormone is also instrumental in enhancing the metabolic rate of the body by releasing the digestive enzymes that promote assimilation of food.

Furthermore, the thyroid hormone also helps in triggering protein synthesis and reducing the level of calcium in the bloodstream by secreting another hormone known as calcitonin. Owing to the critical nature of its functions, an imbalance in the level of thyroid hormone in the body can lead to several

other ailments as well.

The thyroid condition is so common nowadays that nearly 13 million people in America alone are suffering from the ill effects of the hormone imbalance, and are yet unaware of the fact that they have a disease. Symptoms of thyroid imbalance are largely misunderstood as the infliction of other ailments such as stress, depression, anxiety, aging and even perimenopause.

### Possible Malfunctions

There are primarily two ways in which the thyroid gland might end up malfunctioning. Whereas the condition where there is a reduced release of the thyroid hormone is known as hypothyroidism, its excessive secretion from an overactive gland is termed as hyperthyroidism.

Both the conditions result in symptoms that are quite similar to those that are caused by the dysfunction or impairment of the sex hormones. Owing to its enormous influence on the energy of the body, the thyroid hormone can be touted as having more Yang properties.

People suffering from hyperthyroidism typically complain of excessive anxiety, high temperatures and insomnia, all of which can be associated with the presence of excess Yang. On the other hand, hypothyroidism can be associated with lethargy, low temperatures and reduced Yang energies.

### Testing for Thyroid Levels

It goes without saying, that most of the conventional blood tests for thyroid are highly inaccurate in predicting an existing imbalance. Studies indicate that saliva testing is known to produce more accurate results in predicting the level of the thyroid hormone in the human body, owing to the fact that it is able to measure the hormone in its free circulation state.

There have been several reported cases wherein the traditional blood testing has been fairly inefficient in diagnosing the affliction of hypothyroidism, and also in monitoring the existing cases that are already under treatment. So if you feel that your patients are having symptoms that might be a result of hypothyroidism, in addition to monitoring general health and family history of the disease, I suggest utilizing the BBT and TSH salivary tests.

There are several medical practitioners that ask their patients to get their hormone tested through a urine test. However, since the urine typically comprises of the hormones that are being expelled from the body as waste, testing it cannot account for accurate measurement of the hormones that are in circulation within the body. In addition to its inability to make measurements at two-hour intervals as per the Chinese Five Element Body Clock method, the results of the urine testing method can be largely influenced by your diet, level of stress and amount of caffeine ingested.

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