

# **Hormone Balancing**

## **The Importance of Hormone Balancing**

How we feel and the quality of life we lead are very dependent upon the delicate balance of three essential functions of our bodies: reproductive hormones, the adrenals glands and the thyroid gland. Each of these powerful components are intertwined, with one interdependent upon the other. When one is out of balance, it has a direct and tangible effect on the others. The net result is that your sense of well-being is diminished and your quality of life affected.

Our goal is to help you first assess your own specific situation to obtain a complete and comprehensive picture of your overall state of health. Based on our findings, we will work with you to develop a holistic strategy specifically tailored to your needs.

## **The Hypothalamic-Pituitary-Adrenal Axis**

The center for coordinating these various functions is the Hypothalamic-Pituitary-Adrenal (HPA) axis. The HPA axis provides a series of feedback mechanisms between the hypothalamus, the pituitary gland, reproductive hormones, the adrenals glands and the thyroid gland.

The interactions among biological systems controls reactions to stress and regulates many body processes, including digestion, the immune system, mood and emotions, sexuality, and energy storage and expenditure.

Each of us responds differently to the intersection of age, gravity, stress, and genetics. Our bodies experience a wide range of changes based on the interactions of each of these factors. Because the functions of the HPA axis are so interrelated, change in one these systems can have a cascading affect on the others.

Our testing methods take into account the full range of the HPA axis functions. In this way, we are able to obtain a comprehensive picture of your particular situation and move forward with a plan to improve the quality of your life. Testing for the various imbalances can include, a Hormone Saliva Test, Bio Impedence Analysis, or Nutrition Based Urine Analysis.

## **The Estrogen/Progesterone Relationship**

Estrogen plays an essential role in the body, and understanding that role is an important step in rebalancing your hormones. In addition to promoting growth of female characteristics at puberty and the development of an oocyte into a mature ovarian follicle, estrogen also promotes cell growth and stimulates the beginning of the menstrual cycle.

High levels of estrogen (both natural and synthetic from the environment) become an issue when they are unopposed by adequate levels of natural progesterone, which then leads to continuous, unrestrained cell stimulation. When that happens, the following issues can arise:

- Excess estrogen is the only known cause of endometrial cancer
- Increased risk of breast cancer

- Loss of bone mass
- Increased risk of autoimmune disorders such as lupus
- Fibrocystic breasts
- Fibroid tumors
- Depression and irritability
- PMS symptoms such as cramping and bloating — in addition to depression and irritability
- Menopausal symptoms such as hot flashes and night sweats — again, in addition to depression and irritability
- Decreased sex drive
- Increased body hair and thinning of scalp hair
- Migraine headaches
- Impaired thyroid function, including Grave's disease
- Increased body fat
- Increased blood clotting
- Impaired blood sugar control

### The Importance of the Estrogen/Progesterone Ratio

The first step for women seeking to reclaim their quality of life is to examine not just their levels of estrogen and progesterone, but the ratio of the two. Often, lab results will report that the levels of estrogen and progesterone are normal, but fail to take into consideration the relationship between them and the symptoms you are experiencing.

A high estrogen-to-progesterone ratio is generally involved in causing the above symptoms. Even this ratio, however, is conditioned by a wide range of other factors, including age, diet, other steroids, thyroid, and other hormones.

Increasing progesterone levels have a number of benefits, including:

- Possible protection against endometrial cancer
- May also help protect against breast cancer
- Supplementation with natural progesterone can help relieve symptoms of PMS
- Relieve symptoms of menopause
- Normalize libido
- Improve the body fat profile
- Improve sleep patterns
- And help relieve migraine headaches

Whether you're still going through your menstrual cycles (or whether you're pre-menopausal, or menopausal, or post-menopausal), it is important to have your estrogen-to-progesterone ratio measured and, if necessary, rebalance it with natural progesterone supplementation.

### **The Thyroid: The Furnace of Life**

The thyroid plays an important role in the body. It is responsible for converting cholesterol into the hormones. Thyroid hormones are essential for the production of energy in each and every cell in the body. Many problems that women experience have thyroid implications — the challenge can be in knowing how to detect such situations and then how to treat them.

Since many women are symptomatic of estrogen dominance and estrogen inhibits normal thyroid function a majority of women have an under active thyroid. As they age, women can experience changes in mood, depression, hair loss, and even difficulty in losing weight despite a healthy diet and exercise. All of these are just some of the symptoms that can be attributed to an under active thyroid.

Adding to the complexity of the situation is the fact that an under active thyroid can be related to an improper estrogen-to-progesterone ratio; many times the two conditions can go hand-in-hand.

Conditions that can have a negative affect on the thyroid include:

- Heavy metals
- Fluorides
- Environmental factors
- Digestive issues
- Soy products
- All forms of estrogen
- Pesticides in commercial foods
- Excess iodide
- Low-protein diet

Some of the symptoms of low thyroid include:

- Chronic fatigue
- Insomnia
- Immune system problems (frequent colds and flu, asthma, bronchitis)
- All female problems (PMS, cyclic migraines, mood swings, fibrocystic breasts)
- Low blood sugar
- Increased cholesterol

As noted earlier, the thyroid is responsible for converting cholesterol into the hormones that are essential to life. If the thyroid is not functioning properly, cholesterol may rise because there is inadequate thyroid hormone to convert cholesterol into bile salts and the anti-aging hormones, pregnenolone, progesterone and DHEA (the precursor for the production of the sex hormones testosterone and estrogen).

What is the thyroid-estrogen connection? Estrogen inhibits thyroid secretion, while progesterone stimulates it. Progesterone is made in the body from cholesterol IF there is adequate thyroid hormone and other nutrients including vitamin A and certain enzymes. A thyroid deficiency, whether caused by estrogen dominance (and its thyroid inhibiting effect) OR an underactive thyroid gland itself, has far reaching consequences.

## **The Adrenal Glands**

The adrenal glands regulate stress, blood pressure, and blood mineral content through the secretion of various hormones. Adrenal function is perhaps the least understood of the three components of the HPA axis, so it makes sense that adrenal dysfunction is the least recognized contributor to why people feel fatigued.

The adrenal glands are responsible for producing more than 30 different steroids and hormones known as corticosteroids. The most important corticosteroids are cortisol, aldosterone, and the adrenal androgens (sex hormones). Of these, cortisol is the principal hormone secreted in reaction to stress, and is necessary for many other functions in the body.

When the adrenal glands are under stress, the body switches into survival mode, also known as “fight or flight.” If this condition continues, it can:

- Cause the body to conserve calories
- Lead to adrenal exhaustion which can decrease immune system function

It is important to note that stress causes not just excess adrenaline to be secreted in to the body, but also excess cortisol. Cortisol has a major impact on glucose utilization by influencing how fat and protein is used. By doing so, cortisol works to regulate the concentration of glucose in the blood stream to ensure a ready source of fuel for the cells under any type of stress.

Glucose is required to convert the thyroid hormone thyroxin (T4) into its active form, triiodothyronine or liothyronine (T3). When T3 is inadequate, sugar (glucose) is burned inefficiently to lactic acid instead of the end product carbon dioxide. As a result, the body gets less energy from the same amount of glucose.

In response to stress, cortisol causes blood sugar levels drop. The body then increases production of adrenaline to compensate for the deficiency of energy and glucose. At first, adrenaline attempts to mobilize stored sugar and fat. Cortisol then increases blood sugar in an attempt to stabilize the need for glucose.

The production of cortisol is a life-saving response to stress but in a person with an under active thyroid, it occurs abnormally in an attempt to elevate blood sugar levels. Cortisol, like estrogen, inhibits the thyroid, creating a vicious cycle that can only be broken by proper hormone balancing. In addition, excess cortisol can lead to hot flashes or night sweats, diabetes, bone loss and glaucoma.

## **The Role of Stress in the HPA Axis Function**

Chronic stress can set in motion the chemistry for a wide range of conditions. However, everyone adapts to stress differently, and the healthier your adrenal function is, the better you will respond to stress. The stronger your adrenal glands, the longer you can withstand extended periods of stress without adverse effects.

The opposite also is true: if your adrenals are weak, the effects of stress will appear faster and more severely. This is what leads to adrenal exhaustion, which in turn can cause a different set of symptoms including low blood pressure, low blood sugar, mental lethargy, muscle weakness, and weight loss.

Since the symptoms of adrenal insufficiency and hypothyroidism overlap, they are sometimes confused or dealt with separately. Addressing an underactive thyroid without supporting adrenal function may leave you with only half the answer.

### **There Is Hope**

You can take control of the situation, and you can regain the quality of life and sense of well-being that you once enjoyed. We have the knowledge, tools, and experience required to help you get back on track and reclaim your health.

We begin with a thorough evaluation and consultation to develop an outline of your complete medical history. We may also call upon a host of tests — saliva, urine, and blood work — to analyze your health outlook.

Each situation is different, and we vary our approach based on your specific needs to put together a holistic strategy to address your issues. With our assistance, you can rebalance your body and return to a better state of health.