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## Thyroid Balance

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### Summary

Thyroid hormone affects every cell in the body and many things affect the thyroid and its hormones. Achieving thyroid balance involves consideration of ovarian and adrenal hormones, stress levels, possible antibody attacks, and inheritance of enzymes with reduced levels of efficiency. Thyroid hormones can affect body temperature, energy, thinking, metabolic rate, weight, bowel function, menstrual cycles, fertility, hair growth and appearance.

Possible symptoms from mild thyroid imbalance are so varied that they can often be overlooked or misdiagnosed, especially if the blood work-up is incomplete. As women transition into menopause, loss of progesterone becomes prevalent and is especially susceptible to low thyroid symptoms. In many patients, very small amounts of thyroid supplementation can make a huge difference in achieving thyroid balance and health.

### Introduction

The thyroid gland is a small fleshy structure found on the front of the neck, just above the collarbone and below the Adam's apple. Thyroid hormones control body temperature and the rate at which food burns and the use of oxygen.

Thyroid problems are more common in women than in men. One reason is that progesterone stimulates thyroid function around women's bodies. Testosterone has a similar effect in men.

Women only produce progesterone when they ovulate. As women age, ovulation becomes less frequent. The transition to menopause marks the end of ovulation, and with it, the near total loss of progesterone. As men age, testosterone gradually declines, but significant amounts still remain even into old age. Loss of progesterone makes women more vulnerable to symptoms of a weak thyroid.

### What are the symptoms of hypothyroidism?

- fatigue
- feeling cold when others are warm
- weight gain
- depression
- forgetfulness (*sometimes known as brain fog*)
- hair loss
- constipation
- dry, coarse hair

- hair loss outside the eyebrows
- puffy face and eyes
- heavy menstrual periods
- brittle nails
- thickened neck (*also known as goiter*)
- slow heartbeat
- dry skin

### **What are the symptoms of hyperthyroidism?**

Many symptoms reflect the opposite of hypothyroidism including:

- nervousness
- irritability
- difficulty sleeping
- bulging eyes with unblinking stare
- rapid heartbeat
- increased sweating
- constantly feeling hot and intolerance to heat
- unexplained weight loss
- scant menstrual periods
- frequent bowel movements
- warm, moist hands
- fine tremor of fingers and hands
- sometimes fatigue and confusion

### **What is the common cause of thyroid problems?**

One reason is a result when body-producing antibodies attack the thyroid gland. These antibodies can be measured as TPO antibodies, AntiThyroglobulin Ab or TSI (Thyroid Stimulating Immunoglobulin). The autoimmune condition, Hashimoto's Thyroiditis, was named after a Japanese doctor. In the early stages of the disease, there can be thyroid overproduction. After the initial hyperthyroid phase of the disease, it is common that the gland gets worn out and becomes hypothyroid, producing too little thyroid hormone. Hashimoto's Thyroiditis can be very complicated, with rising and falling hormone levels that must be closely followed and treated.

**Are there other causes of thyroid disease?** Many individuals and their families have low thyroid levels simply because the gland does not produce enough hormone. This is quite common in northern Europeans. Occasionally, a thyroid cancer may cause thyroid symptoms.

### **I'm under a lot of stress and feel tired all the time.**

Constant stress can cause the adrenal gland to produce excessive amounts of the stress hormone cortisol and adrenalin. Although the exact mechanism is not clear, an excess level of these hormones stimulates the production of Reverse T3, an inactive form of thyroid hormone. Instead of increasing energy, it results in a relatively low thyroid level. Elevated stress hormones can also cause cravings for fat and carbohydrate. Excessive cortisol and a low thyroid generate a feeling of fatigue, hunger and weight gain. Watching calorie intake, exercise and other stress reduction activities such as yoga, meditation, breathing techniques and if possible, changing to a less hectic lifestyle can be helpful. Taking antidepressant medications may also help.

### **What are the two main thyroid hormones?**

T4 is the main product of the thyroid gland. It is called T4 because each molecule of hormone has four iodine atoms. The thyroid gland also makes a small quantity of T3. Each molecule of T3 has only three iodine atoms. An enzyme called deiodinase converts T4 into T3. For some family members, deiodinase works more efficiently while others will experience chronically low T3 levels. T3 is more

powerful than T4 but is destroyed very quickly, lasting only a few hours. T4 lasts for days and acts as a reserve hormone supply for the making of T3.

### **What thyroid blood tests does Georgia Hormones usually obtain?**

TSH (thyroid stimulating hormone), Total T4, Free T4, Total T3, Free T3 and TPO Antibodies. If needed, may order TSI and ATG antibodies, TBG (thyroid binding globulin) and reverse T3. There are many older indirect thyroid function tests that are less commonly used.

### **My doctor tested my thyroid and said it was normal.**

Many doctors measure only TSH. Although many authorities say TSH is sensitive to thyroid levels, we have discovered that it's frequently not the issue. We measure how the pituitary gland is directing the thyroid gland, and how the thyroid gland responds. Every day we discover women with normal or even low TSH but have low levels of total or free thyroid hormones. Hashimoto's Thyroiditis is actually quite common, being present in about 17% of women over 35 years old. It is less common in men.

### **Could I have a low thyroid and still have *normal* blood tests?**

Laboratories define as abnormal, only those thyroid values in the lowest 2½ % and highest 2½ % of the population. After reviewing thyroid tests for thousands of women and men, I have found that many people in the lower 20-30% of the test range have symptoms of hypothyroidism. Doctors frequently ignore the symptoms of patients with moderately reduced thyroid levels.

### **What should I do if I have a low T3 level?**

Although the thyroid gland may be making sufficient T4, it may not convert into T3 in adequate amounts. Few physicians, even endocrinologists, check T3 levels. T3 is available under the brand name of Cytomel. Armour Thyroid, freeze dried pork thyroid, is 80% T4 and 20% T3. Compounding pharmacies can make capsules containing any needed combination of T3 and T4. Since T3 lasts only a few hours, it may be necessary to take several doses throughout the day.

### **Conclusion**

A large segment of the population is suffering from various forms of thyroid dysfunction. Doctors frequently miss the diagnosis and ignore the patient's symptoms. Safe, inexpensive, small amounts of bioidentical thyroid supplements are readily available and can help many people feel so much better.

### **Additional reading**

Dr. Goldman reviews the books: [\*Hypothyroidism: The Unsuspected Illness\*](#), by Broda Barnes and [\*Overcoming Thyroid Disorders\*](#) by David Brownstein.