

THE THYROID GLAND

Billie J. Sahley Ph.D., C.N.C.
Diplomate, American Academy of Pain Management

The thyroid gland is located in the front of the neck. It is made up of two lobes, one on each side of the windpipe just under the voice box. The thyroid gland is usually heavier in women than in men.

One of the major hormones released by the thyroid gland directly into the bloodstream is thyroxine. It is one of two hormones produced in the thyroid for normal growth, development and maintenance of a normal metabolic state. Thyroid hormones influence the metabolic rate in two ways, by stimulating almost every tissue in the body to produce proteins and increase the amount of oxygen that cells use.

To produce thyroid hormones, the thyroid gland needs iodine that is derived from food and water and certain supplements. After the thyroid gland uses the hormones it needs, some of the iodine contained in the hormones returns to the thyroid gland and is recycled to produce more thyroid hormones. Essentially, thyroid allows you to convert glucose into energy.

Thyroid hormones in the body are in two forms. Thyroxine (T4) is produced in the thyroid gland and has little effect on speeding up the body's metabolic rate. Triiodothyronine (T3) is the major producer of about 80 percent of the active form of hormone; the remaining 20

percent is produced and secreted by the thyroid gland itself.

Many factors must fall into place for the thyroid gland to function normally. The big three, the hypothalamus, the pituitary gland and the thyroid gland must bind proteins in the blood and have a smooth conversion in the liver and other tissues of T4 to T3.

When the thyroid gland malfunctions physicians will make this determination by laboratory tests. Their findings will tell them if you are hypothyroid or hyperthyroid.

Most often hypothyroidism is called a disease of aging - but hypothyroidism can surface in the young as well if the body's thermostat, the hypothalamus does not produce enough thyroid hormone.

Scientists have now determined that certain supplement deficiencies can result in problems with the thyroid gland. Stephen E. Langer, M.D., author of *Solved: The Riddle of Illness*, estimates that 40 percent

Symptoms of Hypothyroidism

Fatigue	Chronic headaches
Chronic depression	Weakness
Slow pulse	Puffy face
Slow speech	Brain fog
Chronic constipation	Confusion
Weight gain	Dry skin
Muscle cramps	Dry, thin hair
Chronic low back Pain	Intolerance to cold
Nervousness	Irritability
Temper explosions	Emotional instability
Low sex drive	

Symptoms of Hyperthyroidism

Rapid heart beat	Confusion
Nervousness	Anxiety
Moist, sweaty skin	Weight loss
Sleep problems	Shakiness
Tremor	Light sensitivity
Frequent diarrhea	Frequent stare
High Blood Pressure	Muscle weakness
Fatigue	Panic sensations

of the population may suffer from deficient thyroid function in some way.

Dr. Langer states the importance of thyroid function to good health should *NOT* be underestimated. The thyroid gland is the largest endocrine gland in the human body. It weighs less than an ounce, secretes less than a teaspoon of hormone substance a year and controls the metabolic activity of all our cells. Dr. Langer also feels that certain vitamin deficiencies result in either primary

or secondary hypothyroidism. B vitamins are of utmost importance to your thyroid production. Vitamin E is also very important to a healthy thyroid.

To check your thyroid Dr. Langer suggests the following simple test. Use a thermometer first thing in the morning before you get out of bed under your armpit-leave it there for 10 minutes.

Dr. Langer gives the following ranges to establish a normal range. From 97.8 to 98.2 degrees Fahrenheit is the normal range. Below 97.8 you are probably hypothyroid. Your thyroid gland is not producing enough. This test should be done for two consecutive days. After you perform this test if you have low results – you should consult a physician and have a blood test that measures T3 and T4 output.

According to Dr. Donohue, Health writer from Orlando Florida, TSH (Thyroid-stimulating hormone), comes from the pituitary gland at the base of the brain. It is the barometer of blood thyroid-hormone levels. Its function is to regulate production of thyroid hormone by the thyroid gland in the neck. High numbers of TSH indicate that the pituitary is trying to whip the thyroid gland into overproduction because there is too little thyroid hormone on board. That's a confusing point. It bears repeating. A high TSH reading indicates a low production of thyroid hormone. And conversely, a low TSH reading indicates the thyroid gland is overproducing thyroid hormone. It's a bit like a thermostat regulating a furnace. When the thermostat registers a too-high temperature, it turns the furnace off; a too-low reading turns the furnace on.

With low levels of thyroid hormone, a person is washed out. A low level of thyroid hormone slows all body functions. The skin and hair become dry. People are tired regardless of the amount of sleep they get. Weight rises even though appetite falls. Menstrual periods become erratic. Supplying the missing hormone banishes all symptoms.

Nutritional Support Program for a Healthy Thyroid:

B complex 100 - 1 daily with meals.

Cal Mag Zinc - 3 to 4 at bedtime.

Ester C, vitamin C can facilitate the production of thyroid. At least 3000 mg daily in divided doses.

Thyrosine - 500 mg twice daily on an empty stomach.

Total Vite - 1 daily for a complete multivitamin.

Manganese, a mineral that is necessary for the production of thyroxine. At least 30 mcgs daily.

Chromium Picolinate - 200 mcg twice daily

My B tab - 1 to 2 daily.

If you are over 40 you should consider **25 mg of Dhea** first thing in the morning. Your Dhea level declines with age and this directly effects your adrenals and thyroid. If you want to know your exact level of Dhea request your physician run a blood test and measure your Dhea sulfate.

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