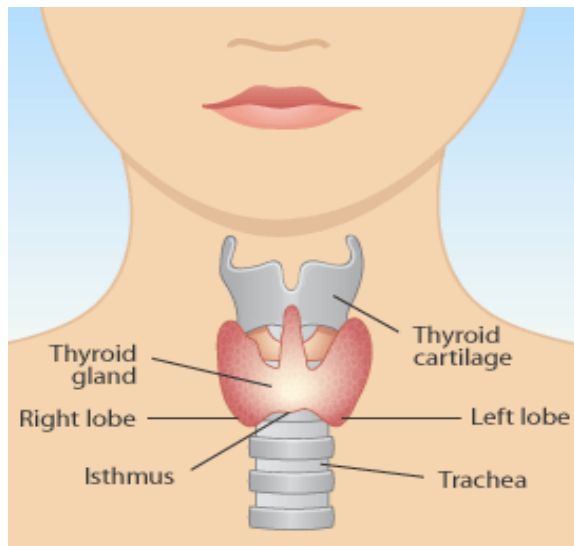


# The Mighty Thyroid

By Bryon Verhaeghe



## Story of the Thyroid

Galen first described the gland and in 1656, Wharton named it “**glandulae thyroidea**”. The word thyroid is Greek and literally means “shield-form”. This gland is in our neck just below the voice box. The bow tie shape of the gland has a thin strip over the trachea (throat) with large lobes to the sides and it lubricates the trachea. These lobes are below the jaw line in the area where extensive arteries carry blood to the eyes, ears, and nose and it is a blood shunt to the brain. These lobes are like a bladder to contain and hold reserves of a molecule made out of iodine and tyrosine; a mineral and an amino acid, respectively. Often overlooked is the fact that these lobes also

contain four areas producing calcitonin, the hormone of calcium.

Common thinking is that the thyroid controls metabolism and that when it is out of order we have weight gain, hair loss, racing heart (tachycardia), and protruding eyes. The symptoms might be accurate but the real problem is not accurate. The thyroid is an immune gland protecting us from infection and disease, hence the name ‘shield’.

## Three molecules are worth discussing with regard to the gland: tyrosine, iodine, and calcitonin.

Tyrosine and iodine combine to form the hormones named T3 and T4. Loosely, this is tyrosine with three iodine molecules (T3) or tyrosine with four iodine molecules (T4). T3 is five times more active than T4. After talking about T3 and T4 (thyroxin), people forget about the calcitonin and its role in infections and bone health. This hormone has the ability to control calcium balance. Our calcium is out of balance when we have fibromyalgia, osteoporosis, prostatitis, high blood pressure, kidney disease, cancer and many other diseases. When the thyroid molecules deplete fighting an infection or disease, we look anaemic because tyrosine is necessary for skin pigment. If tyrosine is low, we look pale and sickly. In the extreme, we are albino (white).

The shielding provided by the thyroid protects our lungs and bronchial tree from air borne bacteria and fungi. It is a reservoir like a bladder to spill contents into the throat when someone sneezes or coughs on us. If we have an eye, ear, or nose problem (sinus) the thyroid provides iodine to the blood to stop an infection and allow healing. When our thyroid compromises and cannot keep up, we develop hay fever, allergies, and asthma. In an acute phase, we end up with bronchitis and pneumonia.

**Many people think that the thyroid hormones are exclusive to the thyroid when in fact they are also manufactured in the skin, brain, pituitary, fat tissue, liver, and kidney.** The thyroid is a major storage site of hormones, along with the blood. This allows the hormones to be available on a moment’s notice to fight an infection as might happen when someone sneezes or coughs on us. Women have a larger thyroid than men and fewer rates of pneumonia, bronchitis, and sinus

infection. The result is women outlive men. This is in part because of a woman's' robust thyroid gland. The thyroid is a key player in our day-to-day health.

Most of the thyroid hormones are circulating in the blood (serum). The majority (97%) are in reserve by being bound to protein. The ones floating around are available and are termed 'free'. In a lab report, this may be termed "free T3" or "free T4". When we have an acute or chronic illness, the body tries to free up more of the iodine rich hormone to fight and heal.

Some molecules increase the binding of iodine hormones to proteins. This reduces the immune system's ability to fight. Some are Estrogen, Methadone, Clofibrate (cholesterol drug), 5-Fluorouracil (5-FU; cancer drug), Heroin, and Tamoxifen (breast cancer drug). All of these lower the availability of iodine hormones and increase the rate of illness. Low levels of iodine in breast tissue are associated with breast cancer. Most of the cholesterol (lipid) lowering drugs cause iodine to become less available to the brain and there is an associated increase in dementia diseases with the use of these drugs.

**"Iodine is an essential element that enables the thyroid gland to produce thyroid hormones."**

Iodine molecules are added to make T3 , and four for T4 " the two key hormones produced by the thyroid gland -- so iodine is essential to the production of these two hormones of the master gland of metabolism."

Some molecules release iodine hormones from serum proteins and lower illness, these include but are not limited to Androgens (male hormones), Progesterone, Aspirin, Antiseizure medications (phenytoin, carbamazepine), Mefenamic Acid (an NSAID used for pain and inflammation-headache, menstruation), and furosemide (water pill). These release iodine hormones and reduce the rate of illness.

**The body will release iodine hormones from blood proteins when there is acute or chronic illness.** When we have liver-disease, or HIV infection there is more binding of iodine hormones to the serum proteins and our immune system becomes compromised. When we exercise there is a shift in hormones and a release of iodine. When we take aspirin, there is an increase in iodine availabilities. The studies note that the low dose 80-81 mg (baby) aspirin is more effective than the adult (325 mg) dose.

The liver uses thyroid hormones to protect our blood and digestive systems. The liver maintains a healthy intestine by releasing these iodine hormones through the bile ducts and gallbladder. Most is re-absorbed and reused with about 20% lost in the feces as active molecules. The whole body uses iodine hormones and this is why there is a relationship between diseases of the thyroid, gallbladder, intestine, and bowel. Many of us are only aware of the relationship between the scalp (hair loss) and eye appearance to the thyroid. What we are not aware of is the thyroid's relationship to all other bodily functions. Many men have heart troubles (tachycardia) that might be due to a thyroid dysfunction.

During the night, our thyroid increases its activity while we sleep. When it is underperforming, we have an increase in night sweats with more aches and pains in the morning such as; stiffness, sneezing, coughing, and heart attacks. Men have more of these problems than women. Older men also have more hearing aids and eyesight problems along with runny noses, phlegm, and snoring.

One effect of introducing iodine as a supplement is a cleaning of the sinus that might feel like a new head cold when it is not. During pregnancy and breast-feeding, it is recommended to supplement with extra iodine. Low levels are associated with retardation of the child. Medical testing may be misleading if not properly read. In the medical literature, iodine is not on any toxic list.

In some countries, it is law that table salt has extra iodine (iodized). In Canada and the USA, it is not law and without realizing it, a person might switch to un-iodized sea salt and become iodine deficient. It is possible to buy sea salt that is iodized. A person with a 'perfect' diet may still be deficient in iodine. Another problem is the increasing pollution in the world that results in us needing additional iodine to deal with the toxins. **The thyroid needs iodine along with tyrosine and calcitonin (found in salmon) to function properly.**

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