

Thyroid Tests



Measuring TSH

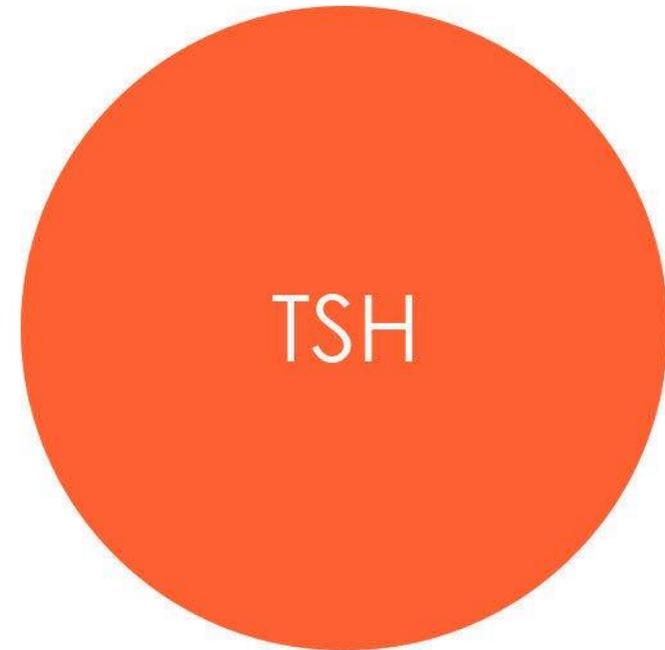
TSH rises when thyroid hormones decline and visa versa

Measuring TSH as an initial test is recommended

Using a radioimmunoassay technique, circulating TSH in the blood can be measured very accurately

High TSH can indicated hypothyroidism

Low TSH can indicate hyperthyroidism



T4 and T3

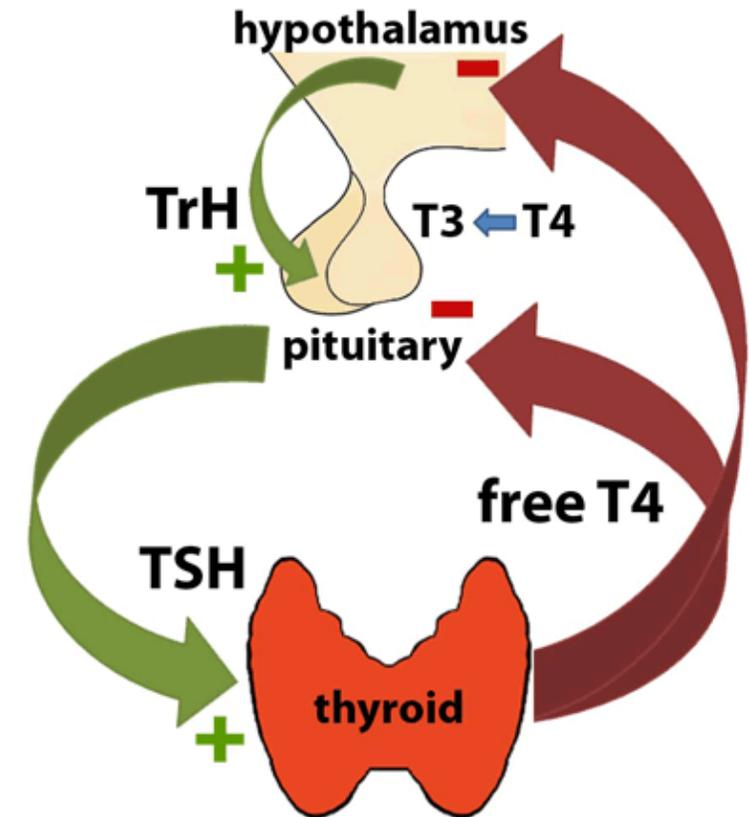
Both T4 and T3 can be measured in a blood test

It is best to measure these along with TSH

This can give a more accurate picture of what is happening in the thyroid

Elevated TSH with low T4 indicates hypothyroidism

Sometimes a person can have low or high TSH and normal T4 or T3 – this means they may be developing thyroid issue



Reverse T3

Known as rT3

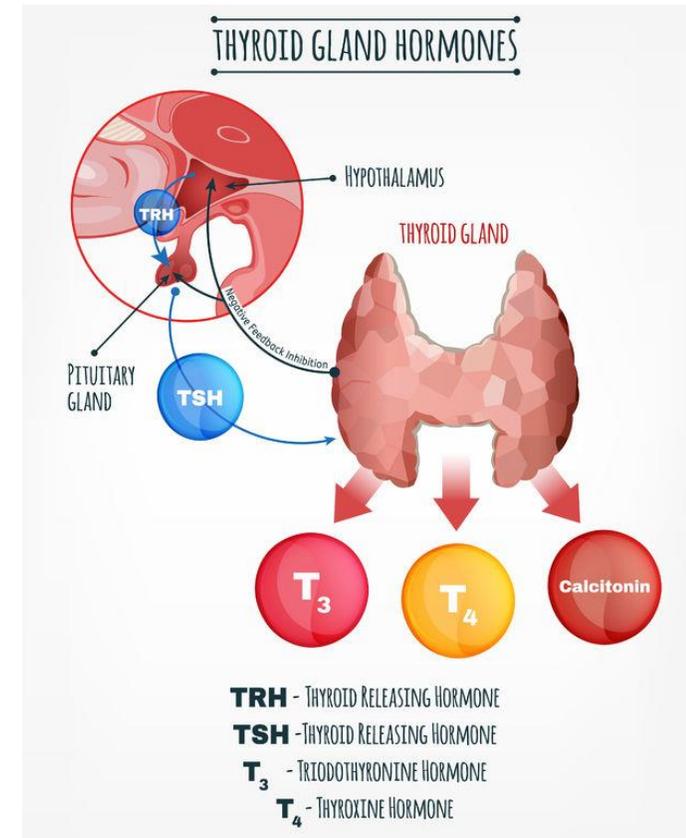
It's a mirror image of T3 and can lock onto the same receptors as T3

This blocks T3 from locking onto the receptors blocking the effect of T3.

Its purpose is to slow metabolism (during hibernation or starvation)

Stress can also cause T3 to rise and compete with T3

Can be tested in a blood test but often isn't



Ideal Levels

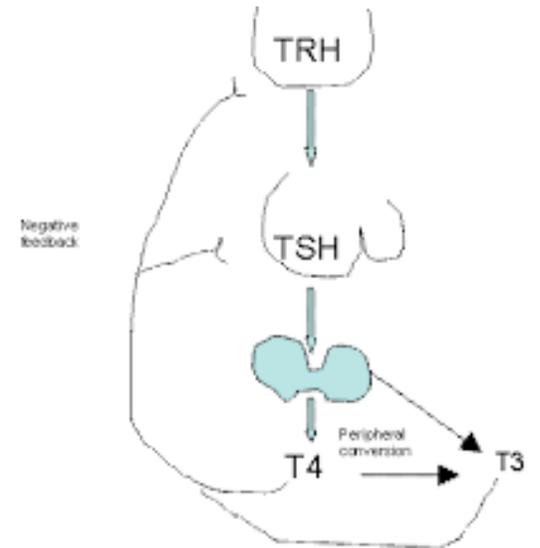
“Normal” TSH range can be from .5 – 4.5 or 4.7 depending on the standards that have been set

Ideal TSH should be 2.0

T4 (normal range 7 – 21) and T3 (normal range 3.5 - 5.7) should be in the middle of the range on the lab test

Many clients will present with symptoms such as weight gain, low iron, hair loss despite a normal result for thyroid levels

Many factors can influence thyroid activity despite “normal” findings.



Thyroid Hormone Binding Proteins

Blood test for thyroid hormones bound to protein which makes them inactive

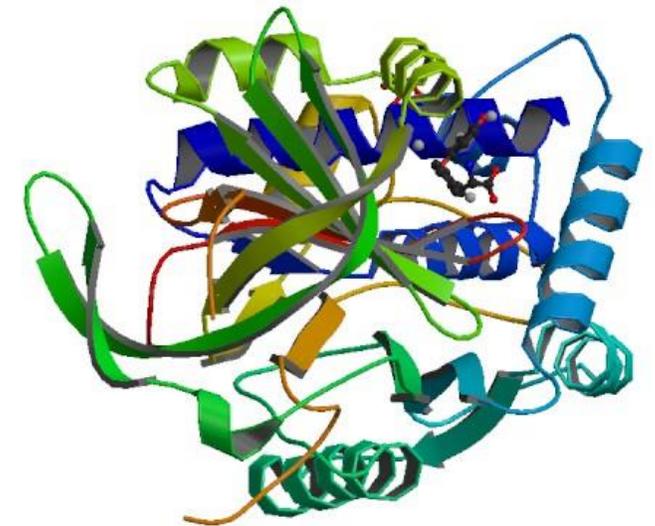
Only free or unbound are considered active

High estrogen can raise the levels of the binding proteins

The thyroid will compensate by producing more T4 and T3 so total T3 and T4 in the blood will be higher

However, active free T4 and T3 and TSH will remain the same

TSH levels are helpful in identifying the real level of free thyroid hormone



Radioactive Iodine Uptake & Scan Test

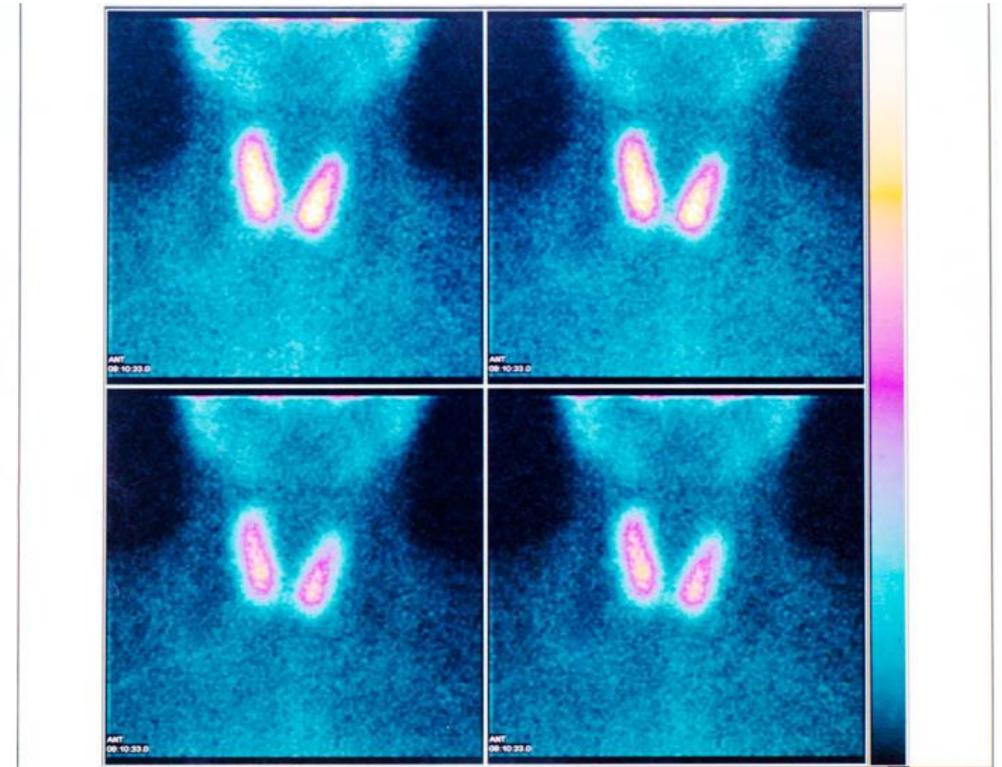
Small amount of radioactive iodine is taken orally

20-25% should be taken up by the thyroid

Given 24 hours before the test and then the radioactivity is measured

Help for distinguishing if it is a serious diseases like Grave's or just thyroiditis

The thyroid can also be scanned to get a picture of the thyroid



Thyroid Imaging

Ultrasound can be used to see the size and shape of the thyroid or if nodules are present

CAT scans and MRIs can also be used but are not as precise as ultrasounds

Ultrasound can distinguish more detail about the nodules including the potential risk of cancer



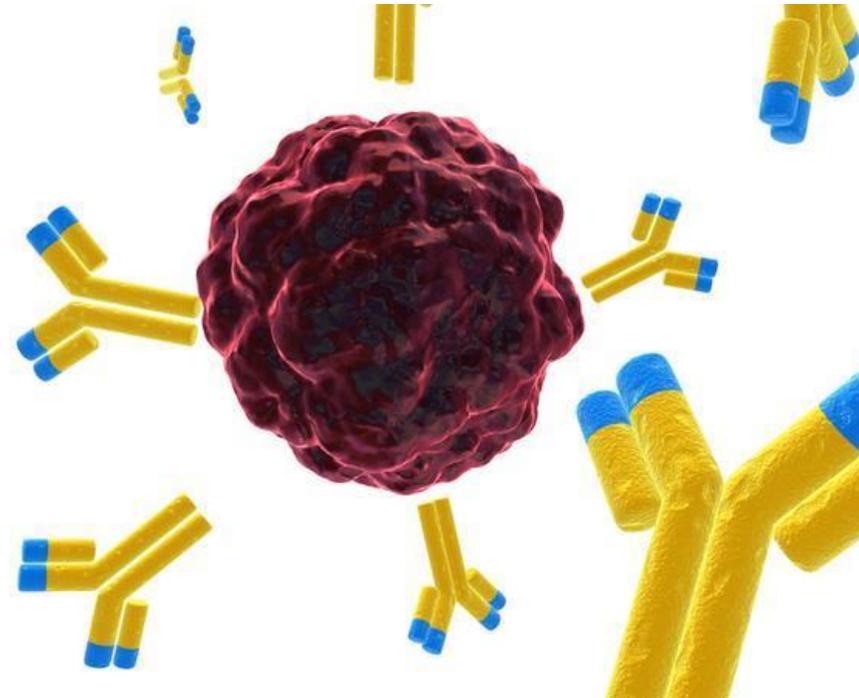
Other Tests

Test for thyroid antibodies which are blood proteins

They react against of the patient's own proteins in the thyroid gland

A blood test used to determine Thyroid antibodies is used to diagnose a thyroid autoimmune disease

Thyroid biopsy is used for nodules to determine if cancerous



Dried Blood Spot

Pinprick – Less Invasive

More stable than drawn blood especially for TSH value

TSH is very sensitive and may register lower than it is due to time drawn vs when the test is run

Is within scope but labs that give nutrition professionals account may not have this test

ZRT Labs: <http://www.zrtlab.com/Patients/Standard-Tests>

Saliva thyroid hormones test do exist but not easy to find



Testing

It is important to know this in case your client has had testing and you want some perspective

You have the hormone questionnaire to help you understand if the thyroid is sub-optimal

Supporting the thyroid nutritionally is always helpful

Supporting other areas that may affect the thyroid is always going to be your best path

