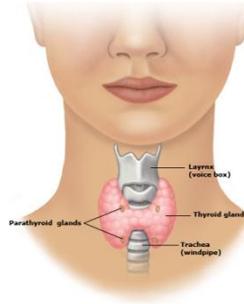


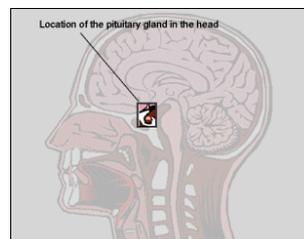
HYPERTHYROIDISM (OVERACTIVE THYROID)

The thyroid is a butterfly-shaped gland that is located centrally in the neck, just above the collarbones and below the larynx (voicebox).



The main function of the thyroid is to regulate the body's metabolism through production of thyroid hormones, T4 and T3.

The production of T4 and T3 is controlled by TSH (thyroid stimulating hormone), which is produced by the pituitary gland. Too much or too little production of thyroid hormones by the thyroid is recognised by the pituitary gland, resulting in a reduction or increase in TSH levels respectively.



Symptoms & Signs

An overactive thyroid can cause the following symptoms and signs:

- Fatigue
- Palpitations/ fast heart rate (and occasionally irregular heart rate)
- Shortness of breath on physical activity
- Muscle weakness in the thighs and upper arms – this is often notice on climbing stairs/ heavy lifting
- Feeling hot and sweaty
- Tremor
- Anxiety/ irritability/ mood swings & difficulty concentrate
- Frequent, loose bowel actions
- Weight loss

Disclaimer: This advice is intended for general information purposes only. It should not be used as a substitute for medical advice, diagnosis or treatment and may not be applicable to individual patients. Always seek the advice and treatment of your own doctor.

- Insomnia

Causes of hyperthyroidism

There are a number of causes of hyperthyroidism including:

1. Graves' disease. This is an autoimmune disease in which the body incorrectly recognises part of the thyroid as foreign and produces antibodies to attack it, which activate overproduction of thyroid hormone. This may also, by the same mechanism, be associated with eye disease, in which the eyes can become irritated, swollen, and bulging. All patients with Graves' disease who have any evidence of eye disease should be seen by an eye specialist (ophthalmologist).
2. Solitary overactive nodule in the thyroid
3. One or more overactive nodules in a "multinodular" thyroid (thyroid gland which contains many nodules)
4. Drugs, including amiodarone and lithium
5. Iodine excess

Diagnosis of hyperthyroidism

Hyperthyroidism (overactive thyroid) can be diagnosed on routine blood tests which measure TSH, T4 and T3 levels. Thyroid antibody tests, particularly TSH Receptor Antibodies (present in Graves' disease) may also be useful, depending on circumstances. These do not need to be done while fasting.

Further tests may be required to clarify the cause of hyperthyroidism, including thyroid ultrasound and nuclear medicine thyroid scan.

Treatment of hyperthyroidism

Treatment of hyperthyroidism depends on the cause and is individualised to each patient depending on their case.

Beta blockers (such as propranolol, metoprolol or atenolol) may be useful to help with some of the symptoms of hyperthyroidism such as palpitations, fast heart rate and tremor.

Antithyroid drugs, which block production of thyroid hormone in the thyroid gland by blocking the main enzyme involved in thyroid hormone synthesis, may be required in many cases.

Definitive treatment by administration of radioactive iodine may be recommended depending on the cause. This treatment may be useful in the case of a solitary nodule, nodule(s) in a multinodular thyroid or Graves' disease.

Surgery, to remove part or all of the thyroid, may be required in some cases.