

## **An introduction to the thyroid**

Your thyroid gland is in the middle of your neck just below your voice box. Thyroid hormones control your body's metabolism, or use of energy.

When the thyroid is overactive, you may notice symptoms such as weight loss despite a good appetite, an awareness of a fast pounding heart beat, feeling sweaty and hot, shaking or trembling, poor sleep, frequent bowel movements, irritability, anxiety and panic. The thyroid gland may become enlarged - called a 'goitre'. The words 'thyrotoxicosis' or 'hyperthyroidism' both mean an overactive thyroid gland making high levels of thyroid hormone. Looking back, you may have had some of these symptoms for several months, before you recognised that something was wrong. Your GP will have confirmed that your thyroid is overactive using a simple blood test.

There are a number of common causes of an overactive thyroid gland. Graves disease is named after the doctor who discovered it – not because it is very 'grave' or takes you to your grave! It is an 'autoimmune disease', caused by your own antibodies, which fight off infections, but in this case they mistakenly react with your own tissues, and stimulate the thyroid gland to make too much hormone. Other family members may also be affected by thyroid disease.

Some patients with Graves disease develop thyroid eye disease: their eyes become more prominent and staring, they may be sore or itchy, and sometimes in severe cases the vision is affected. We will discuss thyroid eye disease separately.

If you are a smoker you are more likely to develop thyroid eye disease: quitting smoking helps reduce the risk.

Another common cause of an overactive thyroid is benign nodules or swellings within the thyroid, which over-produce thyroid hormone. These are not thyroid cancers. You may have many nodules (a toxic multinodular goitre) or a single nodule (a toxic nodule). Toxic just means over-active.

The cause of your overactive thyroid may be clear from your medical history and clinical findings when the doctor examines you. Thyroid antibody levels can be measured in a blood test. You may need a thyroid uptake scan to see how your thyroid is working: a tiny amount of a radioactive chemical is injected into a vein, then a special camera is used to take pictures of your neck (like an X-ray) from different angles. You do not need to go inside a scanner for this test. The chemical leaves your body quickly.

There are three different treatments for an overactive thyroid: tablet treatment, radioiodine treatment or surgery. They all have pros and cons: we will discuss them one by one.

If you are pregnant, trying for a baby, or you had a baby within the past year, you should tell your doctor, as this is important in relation to the cause of your thyroid disease, the investigations and the treatment.

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