

Patient information: THYROID DISEASE

What is the thyroid gland and what does it do?

The thyroid gland is a small, butterfly-shaped gland located at the front of the neck. The gland uses iodine (found in small quantities in many foods) to produce thyroid hormone which controls many aspects of health, including:

- the rate at which the body's reactions work – the “metabolic rate”
- body weight and temperature
- heart rate and blood pressure
- mental alertness
- growth in children.

What can go wrong with the thyroid gland?

Disorders of the thyroid gland are common. They occur when the thyroid produces too much or too little thyroid hormone. Sometimes the thyroid grows bigger or develops abnormal cells that may be benign (not cancer) or malignant (cancer).

Most thyroid diseases can be treated with medicines, but sometimes surgery to remove part of or the entire gland is necessary.

Abnormalities of the thyroid gland occur when the thyroid is

- too active or ‘overactive’ (known as ‘**hyper**thyroidism’ or ‘thyrotoxicosis’)
- enlarged (also known as a ‘goitre’)
- is cancerous or suspected of containing a cancerous tumour



Overactive thyroid

If your thyroid gland is overactive (produces too much thyroid hormone), you may be described as being ‘**hyper**thyroid’ and have one or more of the following symptoms:

- staring eyes
- restlessness
- anxiety and sleep disturbance
- a fast heart rate
- increased appetite with weight loss
- diarrhoea
- a dislike for hot weather.

Blood tests will have confirmed your diagnosis. The aim of treatment is to control the effects of the excess hormone and you may have been prescribed medication to help with this.

If the disease continues after a trial of medication a definitive treatment may be required. This may involve the use of radioiodine (a radioactive version of iodine). This is given by a doctor usually in the form of a tablet and the radioactive iodine is selectively absorbed by the thyroid gland, some of whose cells are destroyed by the radioiodine.

Surgery is an alternative definitive treatment and is recommended if radiotherapy and/ or medication are not suitable or effective or at the request of the patient. The advantages and disadvantages of each option will be discussed with you by your doctors.

Underactive thyroid

If your thyroid gland is underactive (does not produce enough hormone), you may be described as being '**hypo**thyroid' and have one or more of the following symptoms:

- tiredness
- poor appetite, weight gain and constipation
- a dislike of cold weather
- swollen lips and a puffy face
- slow heart rate

Blood tests will have confirmed your diagnosis. An underactive thyroid is treated with medication known as 'thyroid hormone supplementation'. These tablets are usually taken for life and levels of the hormone in your body are regularly checked with blood tests.

Goitre

When the thyroid grows so large that it becomes visible under the skin, it is called a 'goitre'. This enlargement can occur when the thyroid is working normally, is overactive or underactive.

Treatment of goitre may be required if it is causing problems with breathing or swallowing, or when there is a suspicion that it may be cancerous.

Thyroid tumours

Thyroid cancer is not common. Initial symptoms include a lump or swelling in the neck, or difficulty with swallowing or breathing. Your voice may sound different or your neck may feel uncomfortable or painful. However, most of these symptoms are also present in benign (non-cancerous) thyroid lumps and so if you experience them, it does not necessarily mean that you have cancer.

A biopsy is done to help find out whether the lump is cancerous or not. This is a procedure in which a special needle is inserted into the gland to obtain a small sample of cells for examination in the laboratory. In some cases, the biopsy does not provide enough information and it may be necessary to have an operation to remove part of the thyroid gland for examination.

If the thyroid lump is benign and not causing other trouble then it can be safely left alone. If the lump is thyroid cancer surgery is required.

Surgery for thyroid cancer involves removal of the entire thyroid gland. If the cancer has spread to lymph nodes, these may also need to be removed in a procedure known as a 'neck dissection'. Some time after surgery, the treatment of your cancer may involve being given radioiodine (radioactive iodine) to destroy any remaining thyroid cells. This combination of surgery and medical treatment is successful in curing most people with thyroid cancer.

Please note

Anyone that has had their entire thyroid removed will need to take thyroid hormone replacement tablets for the rest of their life.