

Thyroid cancer

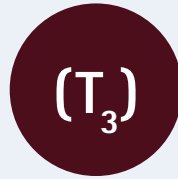
About the thyroid gland

A gland is an organ in the human body that releases particular chemical substances for use in the body. The thyroid gland is a small gland that sits at the base of the neck, just below the voice box. It is made up of two lobes with a bridge in the middle called the isthmus.

The thyroid gland produces the following hormones:



thyroxine



triiodothyronine



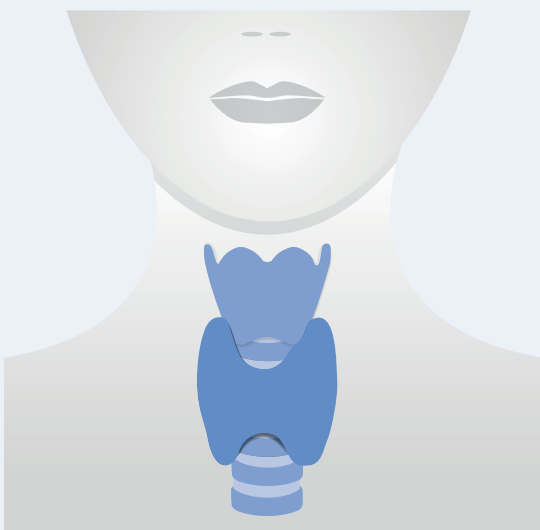
calcitonin

The thyroid is sometimes referred to as the 'activity' gland because the hormones T₄ and T₃ help control the speed of body processes – the metabolic rate. The thyroid gland itself is stimulated by the pituitary gland and hypothalamus which are higher centres in the brain. The third hormone, calcitonin, is involved in the control of circulating calcium in the blood.

If a person's thyroid gland doesn't produce enough hormones, they will feel tired and lethargic, and may gain weight. This is known as hypothyroidism.

If the thyroid gland produces too many hormones, they will feel hungry and anxious, and may lose weight. This is known as hyperthyroidism.

Location of thyroid gland



Thyroid cancer

Thyroid cancer is uncommon, with approximately 53,000 newly diagnosed cases in the Europe each year. It is two to three times more common in women than men.

Types of thyroid cancer:

- **Anaplastic** – this is a rare type of cancer which is fast growing. It is mostly seen in older people and can be difficult to treat
- **Follicular** – this is less common, which accounts for 15% of thyroid cancers. It occurs more commonly in women over 50 years of age
- **Lymphoma** – it is also possible to have lymphoma of the thyroid gland. Lymphoma is a type of cancer that begins in the immune system cells
- **Medullary** – this is a rare type of cancer that is associated with a family history
- **Papillary** – this is most common, it is slow growing and found in younger people

Risk factors

- **Benign thyroid disease:** 1 in 5 thyroid cancers occur in people who have a history of thyroid nodules, a goiter (swelling of the neck) or inflammation of the thyroid
- **Radiation exposure:** including radiotherapy treatment to the neck increases the risk of thyroid cancer
- **Family history:** this is especially the case for medullary thyroid cancer. People who have an inherited gene called the RET oncogene have an increased risk

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of medullary thyroid cancer. This may be part of a syndrome with a risk of developing other cancers of other glands. Family members of someone with medullary thyroid cancer can be tested to check if they have inherited the faulty gene. There is also a slight increased risk of thyroid cancer if you have an inherited gene that causes a bowel condition called familial adenomatous polyposis

- **Obesity:** some studies have found an increased risk of thyroid cancer associated with obesity, and therefore a balanced diet and exercise may reduce the risk

Symptoms

- A painless lump in the neck, slowly getting bigger
- A hoarse voice that lasts for more than a few weeks
- In rare cases a thyroid lump can press on the food pipe and cause difficulty swallowing
- In rare cases a thyroid lump can press on the wind pipe and cause breathing difficulties

It is unusual for thyroid cancers to upset levels of the circulating thyroid hormones.

Diagnosis

You should begin by seeing your family doctor. They will ask you about your symptoms, examine your neck, and may want to check your blood thyroid hormone levels. If your doctor feels it is appropriate, they may refer you to a specialist.

At the hospital, the specialist will go through your symptoms again, examine your neck and arrange other tests. If not done already, they will check your blood thyroid hormone levels, perform an ultrasound scan of the thyroid and take a needle biopsy of the lump.

Tumour staging

The staging of a cancer means how big it is and whether or not it has spread. The main techniques used to assess this are TNM staging and numerical staging systems. In the TNM staging, T stands for tumour and is based on the size of it, N stands for lymph node involvement and M stands for metastasis, which is when cancer spreads to other parts of the body.

Treatment

In most hospitals, a team of specialists called a multidisciplinary team will advise on the best treatment for you.

This team includes, but is not limited to:

- A dietician
- An endocrinologist (a specialist in hormone and glands medicine)
- A nurse specialist
- An oncologist (a cancer specialist)
- A pathologist (a doctor who specialises in tissue analysis and disease)
- A physiotherapist
- A psychologist/counsellor
- A radiologist (a doctor who advises on scans)
- A speech and language therapist
- A surgeon

Treatment has a very high chance of curing papillary thyroid and follicular thyroid cancer. It may also cure medullary thyroid cancer, but anaplastic thyroid cancer is more difficult to treat.

Surgery: Often the first treatment for papillary, follicular and medullary thyroid cancer is surgery. This may involve removing part of the thyroid (hemithyroidectomy or lobectomy), or the whole thyroid gland (total thyroidectomy). Sometimes it may be necessary to remove lymph nodes from around the thyroid gland.

Thyroid Hormone Treatment: This is usually given after surgery to replace the hormones that the thyroid gland normally produces. This can also reduce the chance of cancer recurrence with papillary or follicular thyroid cancer.

Radioactive Iodine: This can be useful in people with papillary or follicular thyroid cancer to destroy any remaining cancer cells that surgery could not remove.

External Beam Radiotherapy: This can also be used to destroy any remaining cancer cells, but chemotherapy is not a common treatment for thyroid cancer.

Thyroid cancer is rare, so there are not many clinical trials. If there is a suitable trial, your specialist may ask you to

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consider participating. All potential new treatments have to be fully researched before they are adapted as standard treatment for safety reasons. These treatments have usually been developed and tested in laboratories before they are tested in patients. Participating in a clinical trial is often beneficial for the patient and helps improve knowledge and development of new treatments.

Follow up

After your treatment, you will have regular check-ups. These will include questions about your symptoms, examination of your neck, blood tests and possibly scans. You will have check-ups for at least 10 years and often for life.

Living with thyroid cancer

Cancer diagnosis can affect people in many ways. It is very important that people have the right information and are able to make decisions and cope with what happens. There are many organisations and support groups, and your specialist nurse and doctor can help you access these.