

Thyroid Lumps

The thyroid gland is located on the lower front portion of the neck (Fig 1). It produces thyroid hormone, which simply put, regulates the production of energy in your body. A healthy thyroid gland is shaped like a butterfly, with the right and left lobes connected by a bridge called the isthmus.

Nodules or lumps occur commonly in the thyroid gland. It has been shown that 5% of the general population have a thyroid lump which can be found on clinical examination while up to 30-40% of the population have a nodule which cannot be felt but can be identified by ultrasound examination. Thyroid nodules occur much more commonly in women. The good news is that the vast majority of these nodules are benign or non-cancerous, with only approximately 10% of all thyroid nodules being found to be malignant or cancerous. Occasionally there may be multiple nodules in the thyroid gland in a condition known as multinodular goitre. When these nodules become very big, this can result in compression of the trachea (or windpipe), or oesophagus to cause breathing or swallowing difficulties. Cancers which occur in the thyroid gland are categorized as papillary and follicular carcinoma, medullary carcinoma, and rarely lymphoma or anaplastic carcinoma.

What are the worrying symptoms and signs for a thyroid nodule?

While the majority of thyroid nodules are non-cancerous and do not cause any discomfort to the patient apart from a lump in the centre of the neck, there are several symptoms and signs which are more worrisome for the possibility of a thyroid cancer. These include:

1. Large size of the nodule (more than 4 cm)
2. A nodule which is growing rapidly
3. A nodule which is hard and painless
4. Fixation of the nodule to the overlying skin or underlying deep neck structures
5. Presence of a hoarse voice
6. Difficulty in swallowing due to the nodule
7. Presence of other enlarged lymph nodes in the neck
8. If the patient is very young (less than 20 years old) or older (more than 60 years old)
9. If the patient has a strong family history of thyroid cancer
10. If the patient has previous exposure to radiation

What tests are necessary if I have a thyroid nodule?

Your doctor will usually take a full history and do a complete examination of the thyroid nodule and rest of the neck. A blood test known as the **thyroid function test** will be done to measure the levels of thyroid hormone in the blood to rule out hyper- or hypo-thyroidism. These conditions can occur if the thyroid gland or nodule is producing too much or too little thyroid hormone. A **fine needle aspiration cytology** (also known as an FNAC) test is routinely performed for a thyroid nodule. This biopsy test is done by using a very fine needle

to remove cells from the lump. It is similar to an injection, causes very little pain and is routinely done in the clinic without the need for any local anaesthesia. The cells are then examined under a microscope to look for the presence of cancer cells. If there are no cancer cells seen, your doctor may choose to monitor the nodule and watch closely for any changes in size. Occasionally an **ultrasound** test is useful to assess for the presence of multiple nodules within the thyroid gland, or to monitor the size of the nodule.

When do I need thyroid surgery (also known as a thyroidectomy)?

You will usually be advised to have a thyroidectomy for one or more of the following reasons:

1. Removal of a malignant (cancerous) or benign (non-cancerous) thyroid tumour.
2. Treatment of thyrotoxicosis, in which an overactive thyroid gland is producing extremely high levels of thyroid hormone.
3. Removal of part or all of a multinodular goitre which is pressing on neighbouring structures in the neck such as the trachea or oesophagus.
4. To remove and evaluate an undiagnosed thyroid mass.

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Fig 1

