

Thyroid Gland Diagnosis and Treatment

WHAT IS YOUR THYROID GLAND?

Your thyroid is one of the endocrine glands which make hormones to regulate physiological functions in your body. The thyroid gland manufactures thyroid hormone, which regulates the rate at which your body carries on its necessary functions. Other endocrine glands are: the pituitary, the adrenal glands, the parathyroid glands, the testes and the ovaries.

The thyroid gland is located in the middle of the lower neck, below the larynx (voice box) and just above your clavicle (collar bone). It is shaped like a "bowtie," having two halves (lobes) a right lobe and a left lobe joined by an "isthmus": (see below) you can rarely feel a normal thyroid gland.

WHEN IS A THYROID GLAND ABNORMAL?

Diseases of the thyroid gland are very common, affecting millions of Americans. The most common diseases are an over or under-active gland. These conditions are called hyperthyroidism (Grave's disease) and hypothyroidism. Sometimes the thyroid gland can become enlarged from overactivity (as in Grave's disease) or from under- activity (as in hypothyroidism). An enlarged thyroid gland is often called a "goiter."

Patients may develop "lumps" or "masses" in their thyroid glands (see below). These masses can either be benign or malignant. They may appear gradually or very rapidly. Patients who had radiation to the head or neck as children for acne, adenoids or other reasons are more prone to develop thyroid malignancy. All thyroid "lumps" (nodules) should generate suspicion and a prompt visit to the doctor.

HOW DOES YOUR DOCTOR MAKE THE DIAGNOSIS?

The diagnosis of a thyroid mass is made by your doctor. Your doctor may have you lift up your chin, extending your neck to make the thyroid gland more prominent. He/she may also ask you to swallow. This helps to distinguish a thyroid mass from other lumps and bumps in the neck. Other tests that your doctor may order include:

1. Fine needle aspiration biopsy
2. A thyroid scan
3. An ultrasound exam
4. CT scan
5. Chest X-ray
6. Blood tests of thyroid function

FINE NEEDLE ASPIRATION

After diagnosing a thyroid "lump," your doctor may recommend a fine or "skinny" needle aspiration of the lump. This is a safe, relatively painless procedure. A fine needle is passed into the lump in the thyroid, and samples of the tissues are taken. Most patients require several passes with

the needle. There is little pain afterwards and very few complications from the procedure. If you have a tendency to bleed excessively, this procedure may not be appropriate. This test gives the doctor more information on the nature of the "lump" in your thyroid gland. The results are read by a doctor called a cytopathologist. This report will help your doctor decide upon the proper treatment for this thyroid mass.

TREATMENT OF YOUR THYROID "LUMP"

Once a diagnosis has been made, a treatment plan will be proposed by your doctor based on his examination and your test results. Most thyroid "lumps" are benign. They are usually treated with thyroid medication known as "suppression" therapy. The object of this treatment is to see if the "lump" will shrink over time while on this medication. The usual time period for some improvement is 3 to 6 months. A repeat fine needle aspiration may be required during this time period. If the "lump" continues to grow during the time when you are taking thyroid medication, most doctors would recommend removal of the thyroid "lump".

If the fine needle aspiration is atypical or suggestive of a malignancy, then thyroid surgery is required.

WHAT IS THYROID SURGERY?

Thyroid surgery is an operation to remove part or all of the thyroid gland. It is performed in the hospital, and general anesthesia is usually required. Usually the operation removes the lobe of the thyroid gland containing the "lump" and possibly the isthmus. A frozen section (an immediate pathological reading) may or may not be used to determine if the rest of the thyroid gland should be removed. Sometimes, based on the result of the frozen section, the surgeon may decide to stop and remove no more thyroid tissue, or proceed to remove the entire thyroid gland, and/or other tissue in the neck. This is a decision usually made in the operating room by the surgeon based on findings at the time of surgery. These options will be discussed by your surgeon with you preoperatively.

After surgery you may have a drain (a tiny piece of plastic tubing), which prevents fluid from building up in the wound. This is removed after the fluid accumulation is minimal. Most patients are discharged two to three days after surgery is performed.

Complications after thyroid surgery are rare. They include bleeding, a hoarse voice, difficulty swallowing, numbness of the skin on the neck, and low blood calcium. Most complications go away after a few weeks. Patients who have all of the thyroid gland removed have a higher risk of low blood calcium post-operatively.

Patients who have thyroid surgery may be required to take thyroid medication to replace thyroid hormones after surgery. Some patients may need to take calcium replacement if their blood calcium is low. This will depend on how much thyroid gland remains, and what was found during surgery. If you have any questions about thyroid surgery, ask your doctor and he/she will answer them in detail.