

Thyroid Surgery

- Surgery is an option to treat **Graves' Disease** if other treatments have failed, or the patient can't take the medication or is uninterested in radioactive iodine treatment. This is always a TOTAL thyroidectomy.
- Surgery is the cornerstone to treating all forms of **thyroid cancer**, and in the majority cases this involves a TOTAL thyroidectomy, sometimes only one side of the thyroid needs to be removed.
- Sometimes surgery can be used to treat **goiter** with/without nodules that is **causing compression** of the airway/esophagus or vocal cords. This is almost always a TOTAL thyroidectomy.
- Specific details about risks/benefits/alternatives to surgery are a dynamic conversation between the individual patient, ENT surgeon and the endocrinologist. But here are the general points to be aware of:
 - Risks
 - there is always SOME risk of infection/bleeding with any surgery.
 - The parathyroid glands can be disrupted during this surgery, which can result in **severe low calcium levels**. Usually this resolves, but rarely it is permanent. Surgeons are very careful to identify and preserve the parathyroid glands. We watch calcium closely after surgery.
 - Vocal cord paralysis can occur during thyroid manipulation resulting in a permanently hoarse voice. Surgeons are very careful to identify and protect the nerve during this surgery.
 - **After removal of thyroid, the patient MUST take lifelong thyroid hormone** replacement which is **VITAL for life**.
 - Benefits
 - If you have Graves' disease, your symptoms will resolve and it is much easier and safer to take thyroid hormone than methimazole or PTU.
 - If you have cancer, this allows the pathologists to accurately identify the stage of disease so endocrinology can determine if additional treatments will be required.
 - If you have compression of airway/vocal cords/etc. This will resolve with the recovery from surgery.
 - Alternatives
 - Of course a patient always has the precious right to choose NO INTERVENTION.
 - In the setting of cancer, there is no alternative to surgery because we cannot accurately stage or treat disease without the pathology report.
 - In the setting of Graves' disease, medication or radioactive iodine ablation are the alternatives to surgery.

- In the setting of a large compressive goiter, sometimes it can be shrunk by appropriate hormone treatments, if applicable, otherwise there are no alternatives.
- How big is the incision?
 - Usually this is a small incision, maybe a couple inches. I had a thyroidectomy in 2002, can you tell?
 - For advanced cancer surgeries or especially large goiters, the incision may be quite large around the neck and extending up toward the angle of the jaw. This will depend on your surgeon's recommendations.
- How long is recovery?
 - People are usually out of the hospital in 1-3 days.
 - Full range of motion and resolution of pain can take a few weeks.
 - The tissue remains firm for weeks to months and eventually goes back to normal.
- I had a total thyroidectomy, how long do I have to take calcium and thyroid hormone?
 - Calcium is usually normalized within 2-4wk.
 - Levothyroxine is FOR LIFE.
 - **Levothyroxine** is the generic medication for human thyroid hormone T4. **It is synthetically produced but IDENTICAL in structure to the hormone your body produces.** Your body converts the T4 to T3 as needed.
 - Armour thyroid is ground-up dehydrated pig thyroid gland, so the hormones are not identical to our own hormones. It's a little harder to adjust because each pill can have different amounts of both T4 and T3 in it, but overall it works fine.
 - Liothyronine (T3) is only used in specific situations because the body is very good at converting T4 to T3 when needed. Using T3 can increase the risk of heart palpitations and thin bones.
- How do I take thyroid hormone?
 - Ideally you take it on an empty stomach and don't take any other medications or food for at least 1 hour.
 - Levothyroxine is a very stable, long acting hormone, so the most important thing to remember is that you need to take it the same way every time. We can adjust the dose according to your body's needs. If you forget a dose, you can take two the next day.
 - Certain medications or foods can interfere with T4 absorption (vitamins/minerals, dairy, PPI medications, etc.)
- How do we know if my treatment is adequate?
 - We check TSH and FT4 again in about 8 weeks.
 - When we hit the sweet spot with levothyroxine or methimazole/PTU dosing, the TSH and FT4 numbers will go back to their normal ranges.
 - **If symptoms persist despite normal thyroid numbers**, we have to "go back to the drawing board" to consider other causes for the symptoms.
 - For certain thyroid cancer cases we will change the dose of levothyroxine to target a specific TSH to minimize the risk of recurrence.

- Resources

- American Thyroid Association <https://www.thyroid.org/thyroid-information/>
- Mayo Clinic www.mayoclinic.com search Thyroidectomy
- About ENT surgeons: <http://www.entnet.org/content/what-otolaryngologist>

Having trouble paying for medications? Try **GoodRx.com** for discounts or we can help you enroll at **universaldrugstore.com** to obtain certain medications from Canada.

Livongo.com can help you get a glucometer. Also check with the **drug manufacturer** and <http://prescriptionhelp.ace.com/> for assistance programs/coupons.