

Thyroid Eye Disease



What is thyroid Eye Disease?

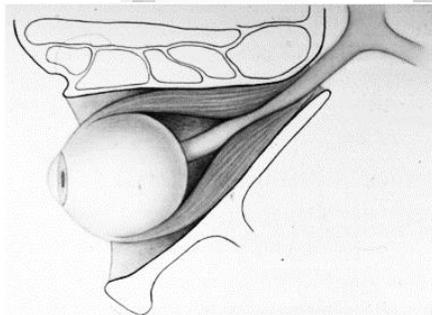
Thyroid Eye Disease (TED) is an autoimmune disease affecting the tissues around the eye. It can occur in all races and ages. Thyroid eye disease (Graves' disease) causes the eyes to bulge forward and the eye aperture to widen. It can lead to double vision, swelling around the eyes, discomfort, and in severe cases, loss of vision.



Who Gets Thyroid Eye Disease?

If you have a thyroid disorder, (Hyperthyroidism or Hypothyroidism) there is an approximately 25-50% chance that you may develop the 'eye disease'. Of these, very few will be severe, and sight-threatening.

What causes Thyroid Eye Disease?



In a normal person, the amount of fat behind the eyeball is constant and the eyeballs move normally. In TED, excess fat gets deposited behind the eyeball, and the muscles that move the eyeball get swollen. Swelling and deposition of certain chemicals (glycosaminoglycans) in these muscles causes the eye to protrude. Simply put, the tissues behind the eye enlarge, making the eye prominent. The eyes may not be able to move together, leading to double vision.

How do I know I have Thyroid Eye Disease?

Many patients confuse their systemic thyroid disorder (affecting the whole body), with the thyroid eye disease (TED). Systemic thyroid disorder (hyper or hypothyroidism), is caused by excess or poor secretion of thyroid hormones T3 and T4 by the thyroid gland (located in your neck). In order to diagnose this, one has to check thyroid blood levels in any standard lab.

The thyroid eye disease, on the other hand, is quite independent of the systemic disorder, though both often co-exist. Thyroid eye disease is diagnosed clinically by an ophthalmologist, by assessing your vision, proptosis, swelling, and eye movement restriction. In addition, a CT scan may be required.

Hence, systemic thyroid disorder needs blood tests, and TED needs eye check-up. These two are fairly independent of each other in their onset, and course.

I am diagnosed with Thyroid eye disease. What happens next?

TED typically has an **active phase** followed by a **stable (inactive) phase**. In effect, the active phase may last from 6 – 18 months, during which the patient may experience discomfort, swelling and redness around the eyes and progressive prominence of the eyeballs. But there's no reason to be alarmed as reduction in vision is rare and occurs only if the optic nerve is compressed due to swelling. Double vision may, however, occur if the eye muscles are severely affected. Treatment during this phase is aimed at reducing the immunological inflammation (active swelling), usually with the use of medications (steroids), or other immunosuppressive agents and, hopefully, limiting the adverse consequences of the active phase.

This active phase can be simply compared to a house on fire. While it is on flames, the doctor concentrates to extinguish the fire (immune swelling) with water or fire-extinguisher (steroids). One cannot think of re-building the house while the fire is still on!

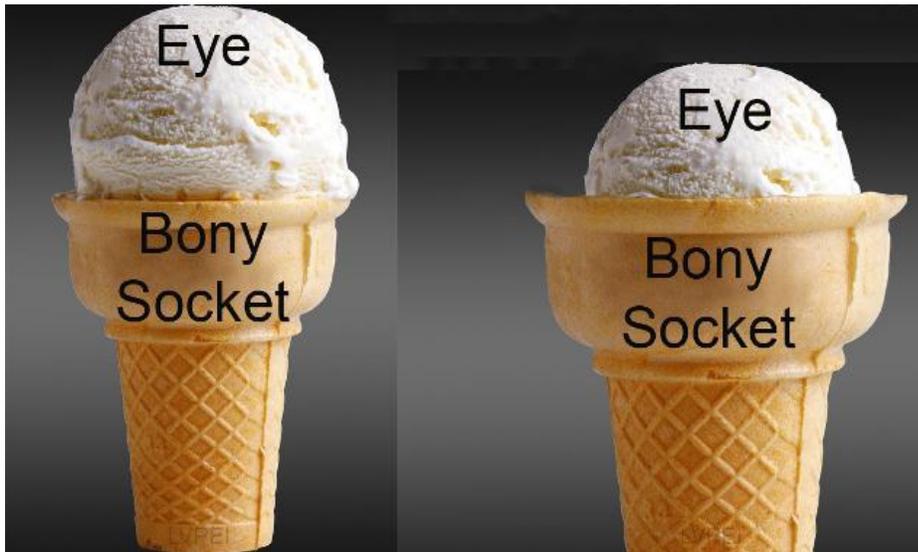
Once the TED has become **inactive**, it is time to perform corrective surgeries that will rectify the damage caused during the active stage. This can be compared to the repair carried out after the house fire is successfully controlled.

Surgical correction of the eye protrusion (proptosis), aligning the eye muscles to correct double vision, narrowing the eyelid apertures, or simply reducing the fat pockets in the eyelids is done at this stage.

My Thyroid specialist (Endocrinologist) is already treating me. Won't that make my eyes normal?

Please understand that the TED is associated with, but not caused by, abnormal thyroid hormone levels. Your endocrinologist will help normalize the thyroid levels in your blood, which is essential for normal functioning of your entire body. However, this will not improve your eye condition. It is a common myth, that the eye disease would normalize once normal thyroid levels are controlled. To bring your eyes back to normal, corrective surgery is most often required.

Can Surgery Restore my normal appearance?



Yes, surgery can bring back your normal appearance to a great extent. The surgical correction is often done in stages, and depends upon the extent of the problem.

For bulging eyes, a **decompression surgery** is performed as the first step. Imagine your bony socket as the ice-cream cone, and your eyeball as the ice-cream scoop over it. Orbital decompression widens the bony socket (enlarges the cone) so that the eyeball (your scoop) sinks into a na



Eye muscle surgery (**squint surgery**) is performed next to improve double vision if present.

Finally, **Eyelid surgery** is performed as the last stage, giving you a more natural, aesthetically pleasing appearance.

Will my Insurance cover this surgery?

Health insurance will cover the costs of a reconstructive surgery for thyroid eye disease.

I am planning to get surgery done. Will my thyroid eye disease recur?

Recurrence of the active phase (which means active phase reappears for the second time) is very uncommon, and occurs in less than 5% of individuals.

For more information or to book an appointment, write to oculoplasty@lvpei.org