

disorders and requires eye muscle surgery for proper functioning of the muscles and for correction of squint.

### **Risks of treatment**

Steroid tablets may cause gastric irritation, weight gain, puffy face, interference with blood sugar control in diabetes etc. Therefore, these are prescribed in as low dose as possible. Only a few patients are not able to tolerate this small dose, and in such patients surgery is advised. Orbital decompression surgery is safe but rarely it may cause bleeding, infection, decreased eye movement, and loss of vision etc.

**Early treatment is essential to protect the cornea and the optic nerve from getting permanently damaged.**

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# **Thyroid Eye Disease**



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The eye is located in a bony socket known as the orbit. In addition to the eye the orbit contains muscles (which move the eye), optic nerve (which has visual function) and fat. In thyroid eye disease, the amount of fat in the orbit increases and the muscles get thickened. As a result there is forward protrusion of the eyes. The protrusion stretches the optic nerve and in extreme cases optic nerve may even be damaged. If the protrusion is too much, the lids may not be able to cover the cornea and corneal ulceration may result. The muscles lose some of their action due to abnormal thickening and this leads to squinting of the eye. Thyroid eye disease occurs mostly in people suffering from thyroid disorders, which may be either excessive or lesser production of the thyroid hormone.

However, some people may have this disease with a normally functioning thyroid gland. The disease usually occurs in middle age at around 40-50 years. Women are more likely to be affected than men.

## Symptoms

- Dryness of the eye.
- Swelling of the upper and lower eyelid.
- Frightened and/or staring look.
- Forward protrusion of the eye balls.
- Inability to close the eye.
- Decreased vision occurs when optic nerve is affected.
- Double vision and decreased eye movements when eye muscles are affected.



## Investigations

The presence of thyroid eye disease is confirmed by orbital ultrasound. In case of difficulty, a CT scan may be required. In addition, any person suspected of having thyroid eye disease should undergo a blood test to know if the thyroid hormone level in blood is higher or lower than normal.

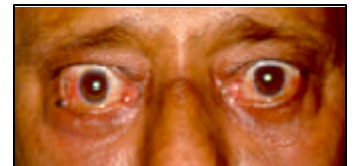
## Treatment

Early treatment is essential to protect the cornea and the optic nerve from getting permanently damaged. In the initial stage, lubricating drops are used to keep the eye moist. Most of the patients are initially given steroid tablets for few months to control the progression of the disease. Closure of the lids may be required if they are not able to close the eyes

fully. The closure is temporary and is done only in the outer part of the lids, leaving the cornea clear so that the vision is not affected. If protrusion of the eyeball is too much, the optic nerve is in



*Preoperative*



*Postoperative*

danger. At this stage, orbital decompression is advised. This surgery involves breaking one or more walls of the orbit surgically, so that the extra fat which has deposited in the orbit due to thyroid eye disease can be removed. Then the eyeball can be pushed back into the orbit. A patient having thyroid eye disease for a long time develops eye movement