

Thyroid Eye Disease

Bulging eyes, excessive tearing and pain, dryness, redness and discomfort in the eyes could signal thyroid disease.

What is Thyroid Eye Disease?

Thyroid eye disease (TED) is an eye condition related to thyroid disease. Thyroid hormones produced by the thyroid gland in the neck regulate metabolism in the body. People with excessive thyroid hormones (hyperthyroidism) can develop eye diseases.

Symptoms

They may have any of the following symptoms :

- Neck swelling from an enlarged thyroid gland (goitre)
- Heat intolerance
- Sweatiness
- Increase in appetite and loss of weight
- Tremors
- Palpitations
- Tiredness
- Anxiety, nervousness and bad temper

The most significant, but rare, complication of thyroid disease is loss of vision due to compression of the optic nerve by swollen tissues around the eye. Swelling of the orbital tissues can cause the eye to bulge outwards and limit the eye's ability to close the

eyelids, exposing the front surface of the eye and causing irritation and damage to the cornea. Patients can also suffer from double vision due to marked swelling and stiffening of eye muscles.

Causes

Thyroid eye disease is more common in women and although often associated with hyperthyroidism, may occur in patients with normal or low thyroid hormone levels. Although the exact cause is unclear, what is known is that the body produces antibodies against its own tissues in the orbit. This sets off a series of biochemical events that leads to swelling of the orbital soft tissues, specifically the eye muscles and orbital fat.

Symptoms

Patients with thyroid eye disease may complain of the following :

- A 'staring' appearance
- Protrusion of the eye
- Tearing
- Eye discomfort and gritty sensation
- Eye redness
- Puffy eyelids
- Double vision
- Squint
- Decreased vision

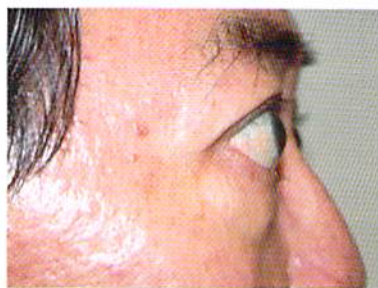
Treatments

Natural Course. It is common for thyroid eye disease to fluctuate

within the first one to two years of the disease. Beyond this time, the disease tends to stabilise. Medical therapy (immunosuppression and radiotherapy) are more effective in the active phase of the disease. Surgical treatment is usually reserved for patients in the inactive phase. It is important for you to be seen and treated by a doctor for the underlying thyroid disease throughout this period. Although thyroid eye disease tends to improve with good thyroid hormone control, this is not always the case, and consultation with an eye doctor is necessary.

Local Therapy. Tear substitutes and lubricants help to protect the surface of the eye from drying. Sleeping on extra pillows helps to reduce swelling around the eyes. Double vision can be troublesome if it affects straightforward and down-looking positions (as in reading). Special lenses called prisms may relieve this.

Immunosuppression. Your eye doctor will advise you on the treatment for thyroid disease. Steroids are used in selected cases. Taken orally, steroids can cause many side-effects when used over a long period of time. These include weight gain, gastric symptoms and bleeding, aggravation of diabetes and high blood pressure and decreased resistance to infection. Where possible, intravenous steroids are given instead. Steroid therapy may



Side view of patient.



Prominent eyes.

also be combined with the use of other immunosuppressive drugs.

Radiation. Radiation is an effective way of reducing the swelling of tissue around the eye and relieving compression of the optic nerve. The therapeutic dose used is low and is usually not associated with significant adverse effects.

Surgery

When vision is threatened, early lid or orbital surgery may be necessary. Otherwise surgery is usually reserved for inactive disease. Surgical rehabilitation is usually staged with orbital decompression surgery to reduce proptosis, followed by squint and eyelid surgeries to eliminate diplopia (double vision) and exposure respectively.