

THYROID  
EYE DISEASE

UNDERSTAND MORE ABOUT  
**THYROID  
EYE DISEASE**



Tomorrow's Eye Care, Today<sup>®</sup>



Singapore National  
Eye Centre

SingHealth

# Thyroid Eye Disease

## What is thyroid eye disease?

Thyroid eye disease is an eye condition related to thyroid disease. Thyroid hormones produced by the thyroid gland in the neck regulate metabolism in the body.

Patients with excessive thyroid hormone in the circulation (hyperthyroidism) can develop eye diseases and they may have any of the following symptoms:

- Neck swelling from an enlarged thyroid gland (goitre)
- Intolerance to heat
- 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 eyes 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.

## **What causes thyroid eye disease?**

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 lead to swelling of the orbital soft tissues, specifically the eye muscles and orbital fat.

## What are the symptoms?

Some symptoms associated with thyroid eye disease may include:

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

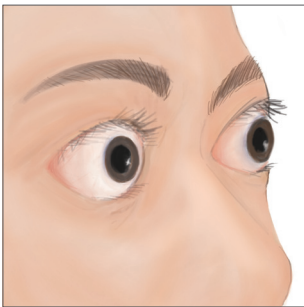


Illustration: Protrusion of the eyes

## How is thyroid eye disease treated?

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 whereas surgical treatment is usually reserved for patients in the inactive phase.

It is important for you to be seen and treated by a physician 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 ophthalmologist is necessary.

### **Local Therapy**

Tear substitutes and lubricants help to protect the surface of the eye from drying. Taping your eyelids closed at night is also helpful. Sleeping on extra pillows helps to reduce swelling around the eyes.

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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 physician will advise you on a suitable treatment for thyroid disease. Steroids are used in selected cases. The effect of steroids is temporary and once it is stopped, symptoms often rebound. Steroids cause many undesirable side effects when used over a long period of time.

While you are on steroid treatment, your physician will monitor you for side effects which include obesity, gastric symptoms and bleeding, aggravation of diabetes and high blood pressure and decreased resistance to infection.

## **Radiation**

Radiation is an effective way of reducing swelling of tissue around the eye and relieving compression of the optic nerve. The therapeutic dose used is low and it 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 stable, inactive disease with the following complications:

- Abnormal staring appearance
- Severe protrusion of the eyes
- Disturbing double vision not relieved by prism glasses
- Drooping or sagging of tissues around the eyes

Thyroid eye disease should be treated by ophthalmic surgeons who specialise in conditions affecting the eyelids and socket.

# LOCATION MAP



## Legend

MRT Station

Taxi Stand

East West Line

North East Line

Shuttle Bus Service  
Mon to Fri ( 8.00am - 7.00pm )  
Sat ( 8.00am - 2.00pm )

Opp Outram Park Stn  
Bus No. 33, 63, 75, 121,  
122, 174, 174e, 851, 970

Outram Park Stn Exit F  
Bus No. 61, 124, 143, 147,  
147e, 166, 197, 961, 961C

Outram Park Stn/Outram Rd  
Bus No. 33, 63, 75, 121, 122, 174,  
174e, 534, 535, 549, 761, 851, 970

This patient information leaflet is a general guide to help patients understand specific eye conditions, treatment or tests. The information does not replace the need for individual advice from an ophthalmologist. Please consult with your ophthalmologist about your specific eye condition and/or concerns.

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