

# EXAMING THE OPTICS OF THYROID EYE DISEASE

Thyroid eye disease (TED), also known as Graves' orbitopathy is an autoimmune condition that affects the eye tissue. The most common cause TED is Graves' disease. 20% of cases occur six months prior to diagnosis. Hyperthyroidism is present in 40% of cases prior to and after diagnosis.



## SIGNS AND SYMPTOMS

Some patients diagnosed with TED may not have any symptoms, but at least half report symptoms:



Eyelid retraction is the most common sign



Inflammation and swelling of tissue around the eye



Dry eyes, itchiness, increased tearing, puffiness around the eyes, redness, double vision, and light sensitivity



Severe cases may lead to blindness

## RISK FACTORS

Family history, age, the female gender, cigarette smoking, and radioactive iodine are risk factors.

**?** **DID YOU KNOW?** First, and second-hand smoking increases the risk of progression of TED. It also decreases the chances of having a successful treatment for TED.

## INACTIVE AND ACTIVE PHASES

Experts use a 7-point clinical activity score to determine if TED is in the active or inactive phases. The 7 points are eye pain, pain with eye movement, eye and eyelid redness, eyelid swelling, chemosis and caruncle edema.

A score of 3 or more suggests an active phase of TED. The active phase of TED can last two or three years, and requires careful treatment from an ophthalmologist.



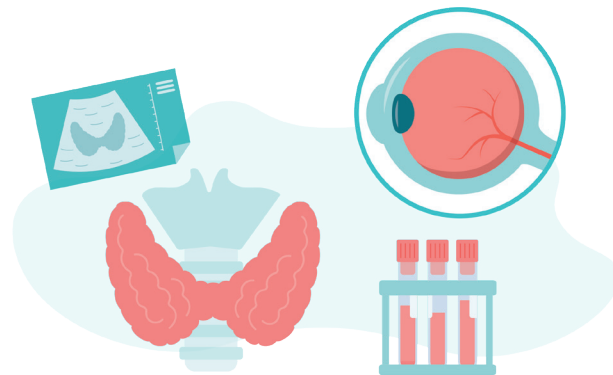
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## TED AND GRAVES' DISEASE

Graves' disease is an autoimmune condition that attacks the thyroid gland. This causes the gland to secrete excess amount of thyroid hormone.

- 40-50% of patients with Graves' disease have signs and symptoms of TED
- 30% have moderate-severe disease
- 5% have sight threatening disease.



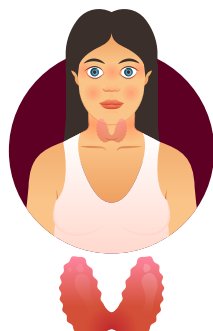
## TED AND HYPERTHYROIDISM

Hyperthyroidism and TED are due to the same underlying autoimmune process.

Normal thyroid



Graves' Disease



### YOUR EYES ARE SENSITIVE!

Receptors, such as the thyroid-stimulating hormone and insulin-like growth hormone 1, are located around the eye and are recognized as foreign by your body. Your body makes antibodies to attack these receptors which leads to swelling of the tissues around the eye.

## DIAGNOSIS AND TREATMENT OPTIONS



A physician will perform tests to assess vision, eyelid measurements, eye movement, and optic nerves.



A referral to an ophthalmologist and endocrinologist is encouraged. The goal of treatment is to restore the normal function and appearance of the eyes.



Treatment options for moderate to severe TED include steroids, radiation, teprotumumab, and other targeted therapies.



To alleviate symptoms at home, experts recommend artificial and eye ointment at bedtime. Experts also recommend avoiding cigarette smoking.



Other options include surgery.



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