



## WHAT IS GLAUCOMA?

Glaucoma is a disease that damages the nerve of the eye (optic nerve), which relays information to the brain.

If left undetected and untreated, it can eventually lead to permanent vision loss.

## HOW COMMON IS GLAUCOMA?

Glaucoma is the most common cause of permanent blindness.<sup>1</sup>

It affects about 1.2 crore people in India.<sup>2</sup>



Studies have estimated that 11.1 crore individuals will be affected by glaucoma by 2040, a vast majority from Asia and Africa.<sup>3</sup>





90% of glaucoma is undetected.<sup>4</sup>



Early detection and proper treatment can help preserve vision.

## WHY IS IT IMPORTANT TO KNOW ABOUT GLAUCOMA?

40% of vision can be lost before one becomes aware of it.



Vision lost cannot be restored.



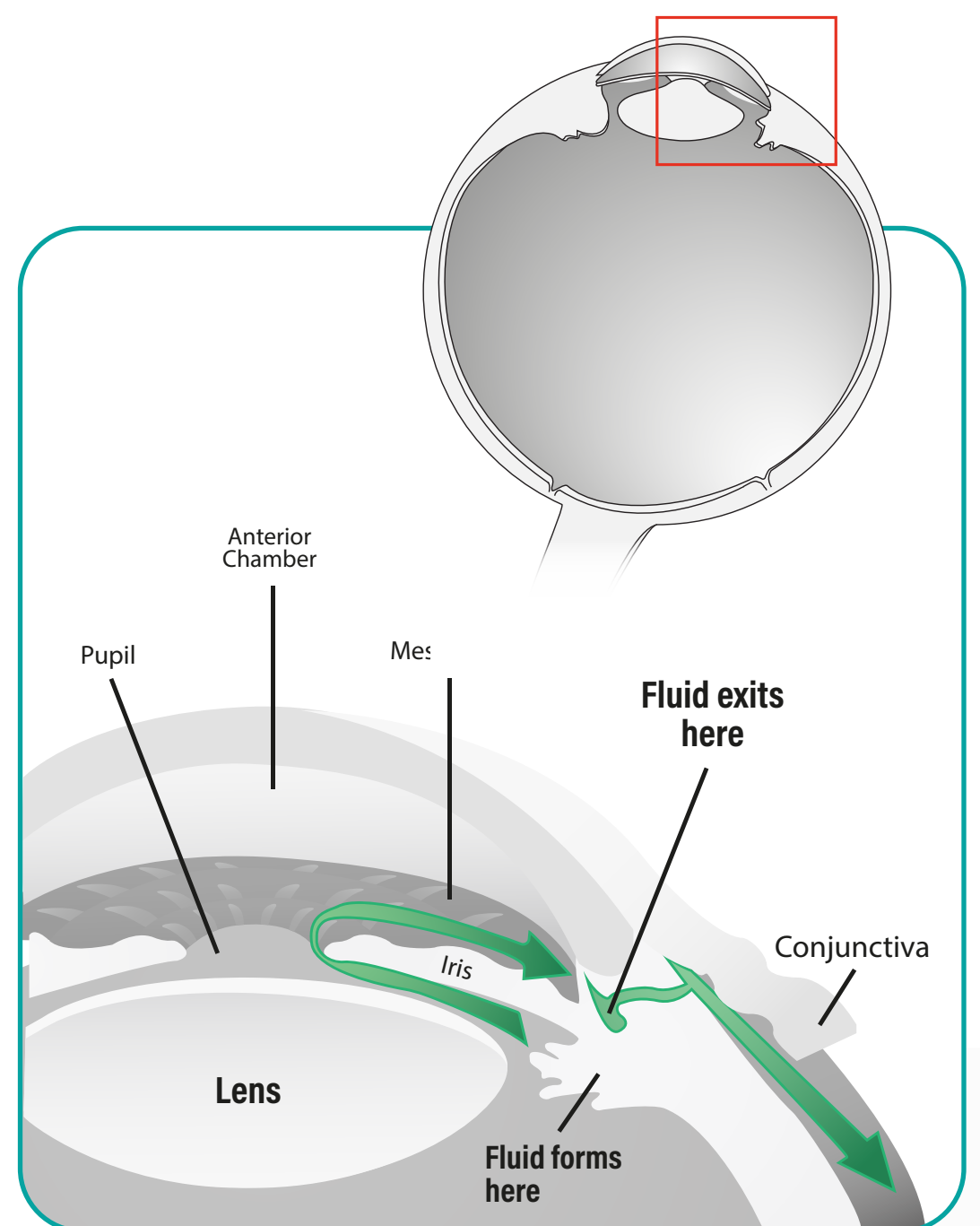
## WHAT CAUSES GLAUCOMA?

The exact cause is unknown.

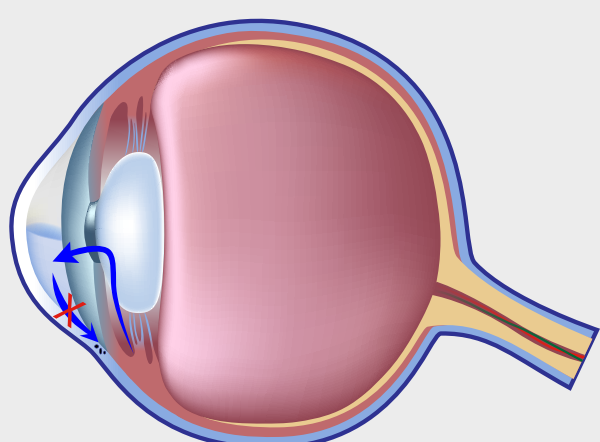
There is a fluid within the eye called aqueous humor which provides nourishment to the eye tissues.

In glaucoma, this fluid drains inefficiently or the passage through which it drains becomes blocked, causing eye pressure to build up.

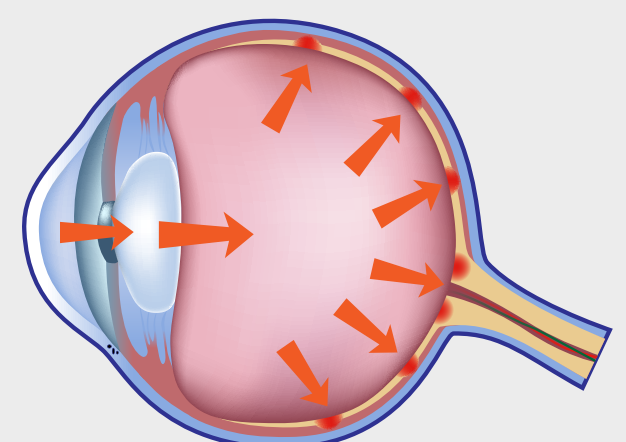
This causes damage to the blood vessels and nerves in the optic nerve resulting in permanent vision loss.

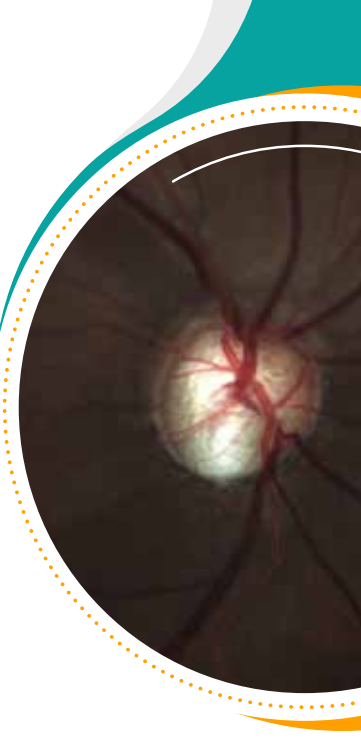


Drainage canal blocked: build-up of fluid.



Increased pressure damages optic nerve.





# HOW DOES EYE PRESSURE AFFECT GLAUCOMA?

Elevated eye pressure increases the risk of having glaucoma.



However it is possible to have glaucoma with below average eye pressure.

Also not everyone with high pressure will develop glaucoma.



The 'ideal' or 'Normal' eye pressure for different individuals varies.

Treatment options for glaucoma aim at decreasing eye pressure.



# WHAT ARE THE TYPES OF GLAUCOMA?

## Primary

(No identifiable cause. Occurs in predisposed individuals)

- Open angle glaucoma.
- Angle closure/Narrow angle glaucoma.

## Secondary

(Occurs secondary to other causes)

- Eye injury.
- Eye surgery.
- Certain eye diseases.
- Certain systemic diseases.
- Steroid use.



# WHAT ARE THE SYMPTOMS OF GLAUCOMA?

Glaucoma is often referred to as the 'Silent thief of sight.'

Most people are unaware that they have a problem as there is no symptoms in the beginning.

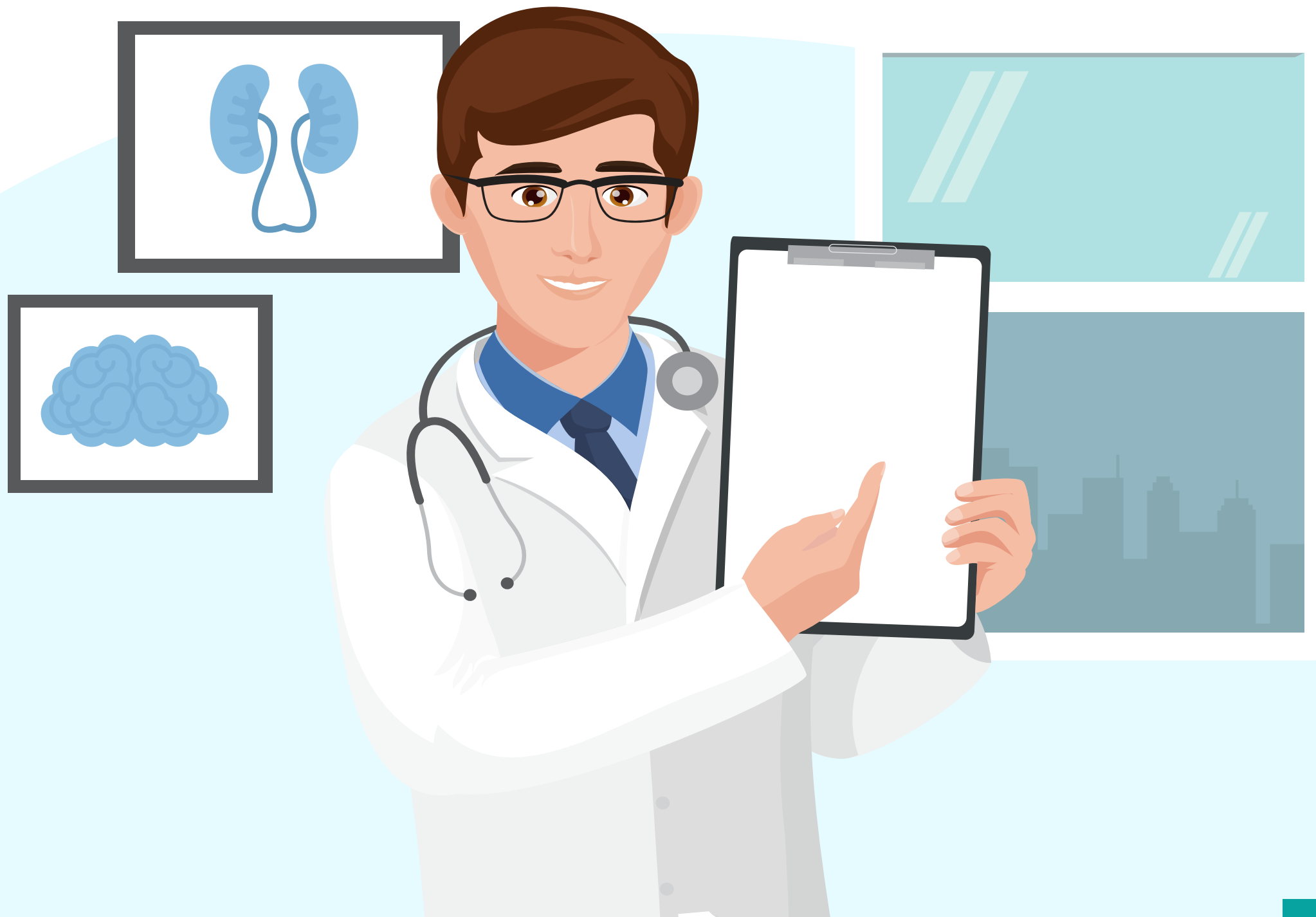
In early stages side (peripheral) vision is affected and in end stage central vision is affected leading to blindness.

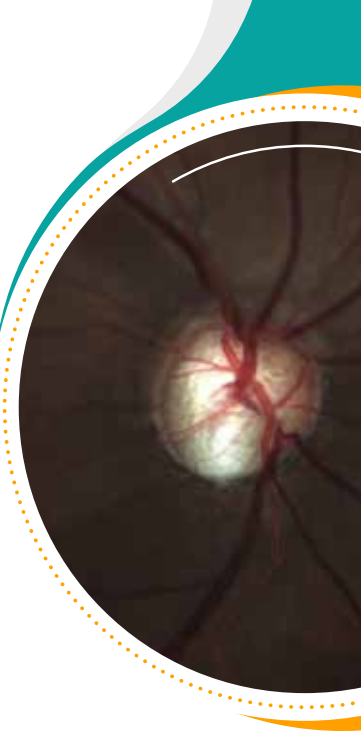


# WHEN TO SEE A DOCTOR?

Get a baseline screening done at age of 40 or earlier if you are at increased risk.

The doctor will tell you how often to followup.





# WHAT ARE THE RISK FACTORS FOR GLAUCOMA?



Steroid use.

Increasing age 40+.



Eye injury.

High refractive error (near sight/ far sight).



Eye surgery.

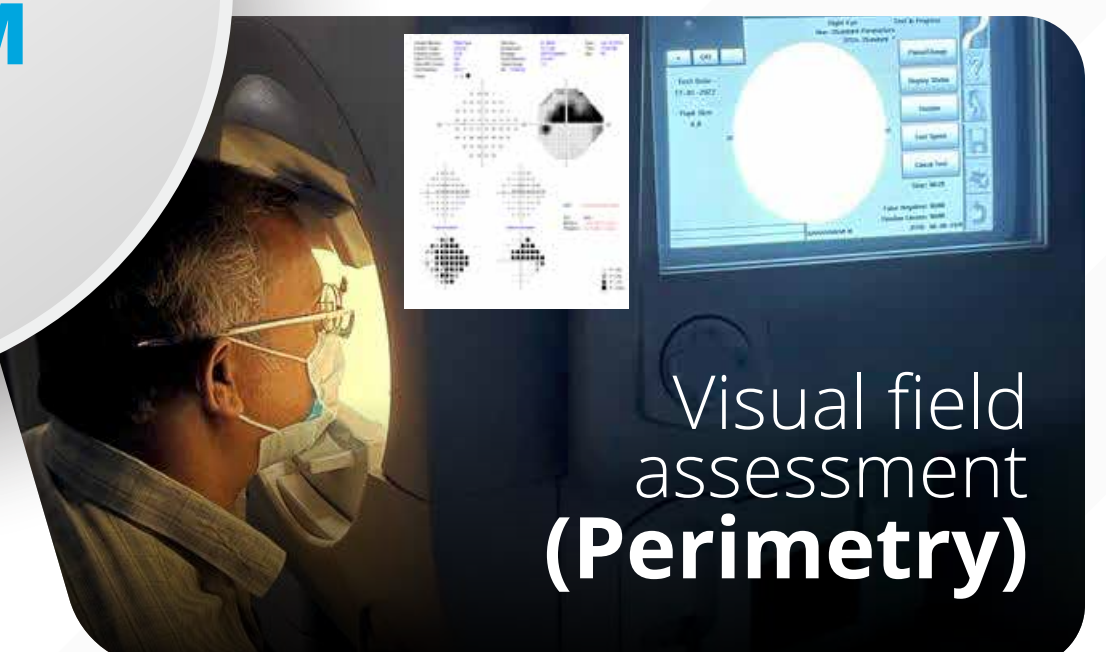
Parents/Sibling with glaucoma.

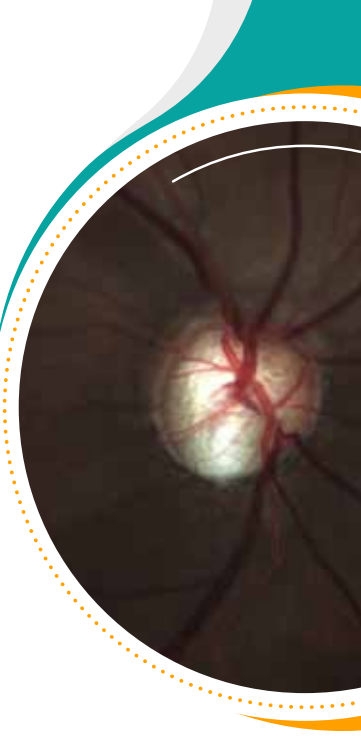


# HOW IS GLAUCOMA DIAGNOSED?



**COMPREHENSIVE  
EYE EXAM**





# DOES EVERYONE WITH GLAUCOMA HAVE TO FEAR BLINDNESS ?



People with glaucoma can have a good quality of life without fear of going blind, if their glaucoma is detected early and treated properly.



Hence regular screening for glaucoma is important.



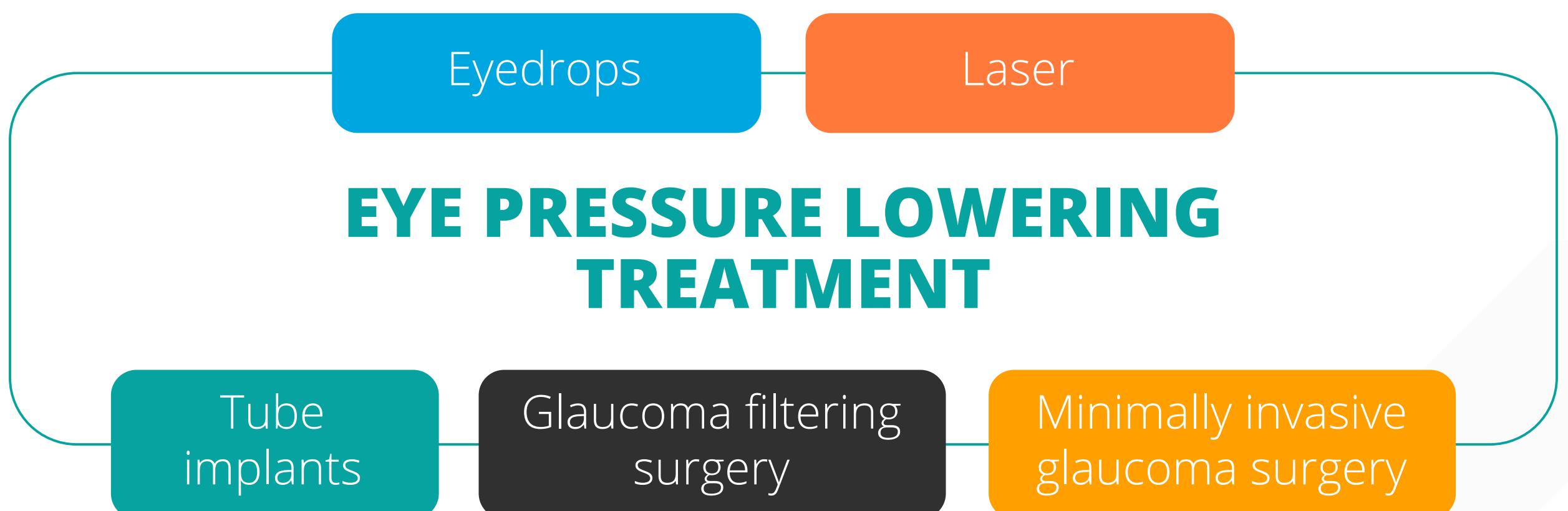
Once diagnosed, lifelong followup with an eye doctor is essential.



Surgical options will have to be considered in advanced or uncontrolled glaucoma to prevent blindness.

# WHAT ARE THE TREATMENT OPTIONS AVAILABLE FOR GLAUCOMA?

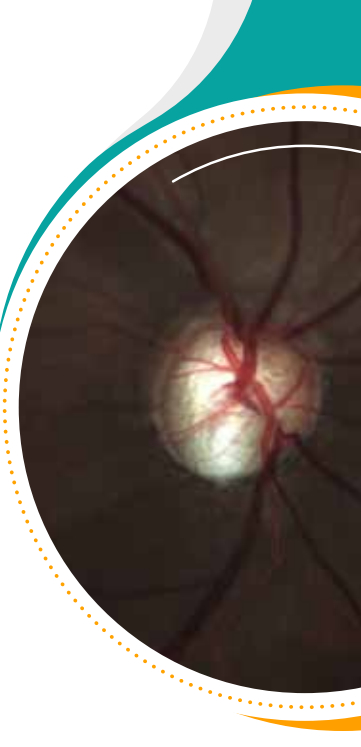
Glaucoma treatment is aimed at lowering eye pressure and prevent further vision loss due to glaucoma.



Surgery is performed when the eye pressure is not controlled by drops, laser or nerve damage is worsening. A patient may need more than one surgery in their lifetime.

Once diagnosed, periodic followup throughout lifetime is necessary.

Glaucoma can be treated, not cured.



# WHAT IS MEANT BY 'NARROW ANGLES'? IS IT THE SAME AS HAVING GLAUCOMA?

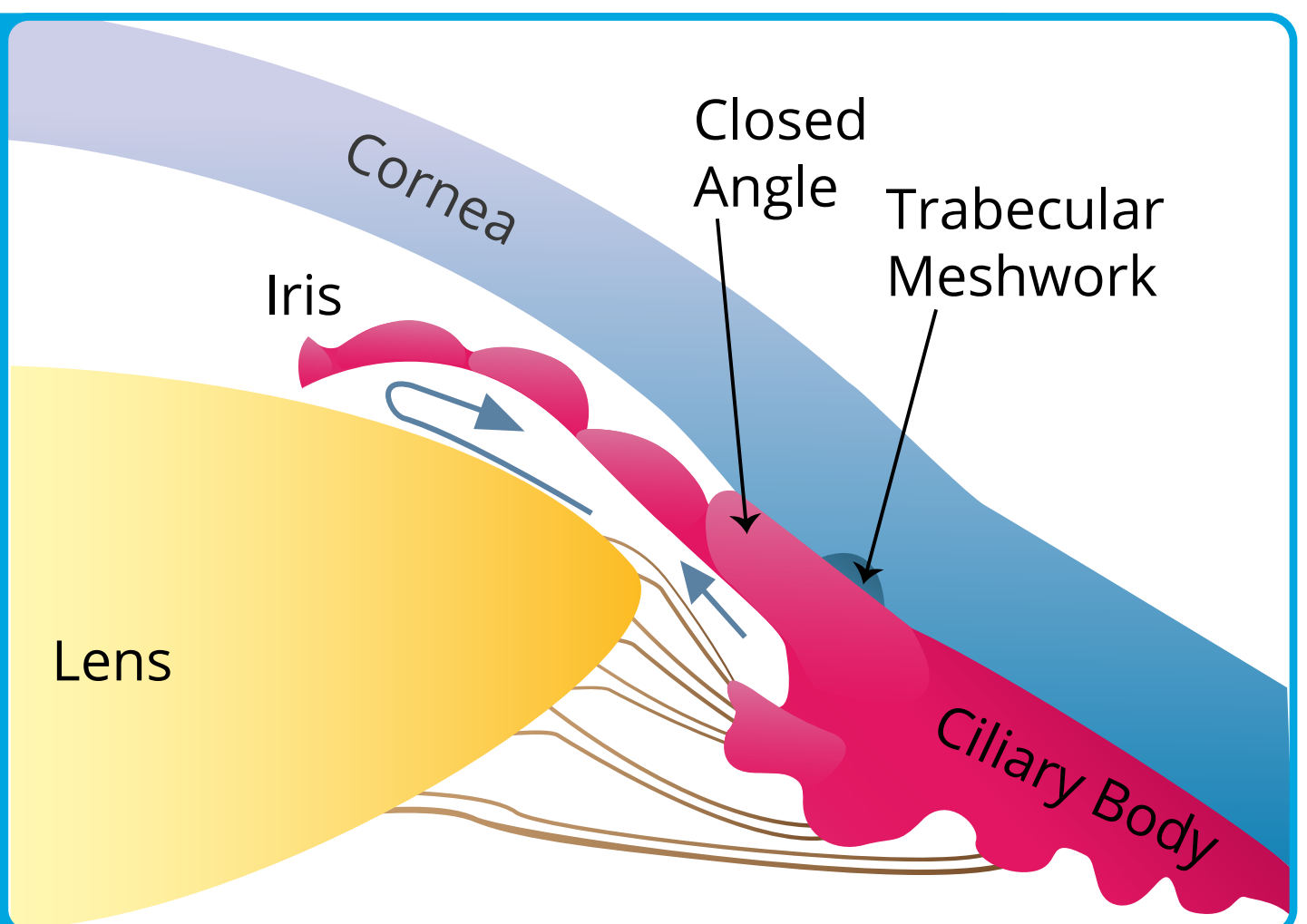
The natural drainage system of the eye is located in the anterior chamber 'angle' between the cornea (transparent layer) and the iris (colored part of the eye).

Some eyes can have only narrow angles without evidence of glaucoma.

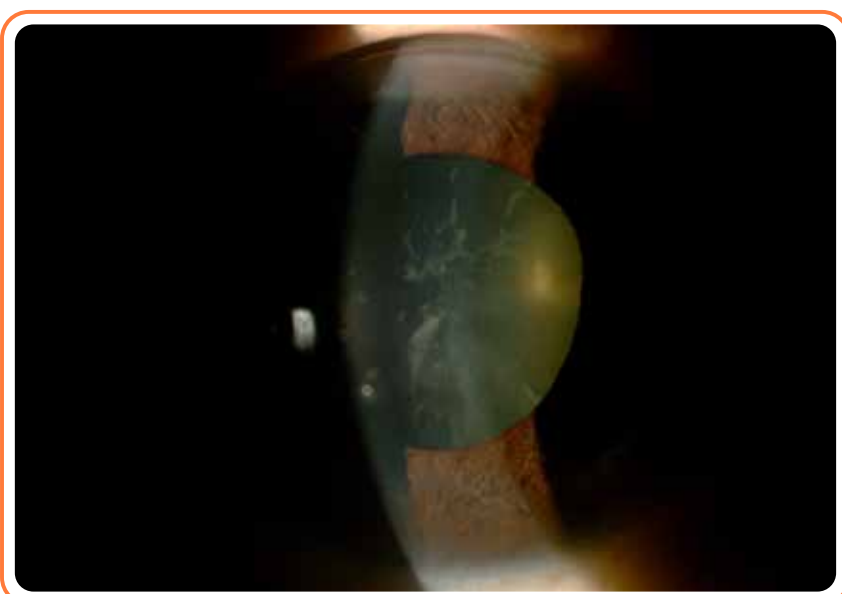
These eyes are at increased risk of developing glaucoma and need lifelong followup. Some of these eyes may need a preventive laser to reduce this risk.

'Primary angle closure glaucoma' refers to an eye with narrow angles that has evidence of damage due to glaucoma.

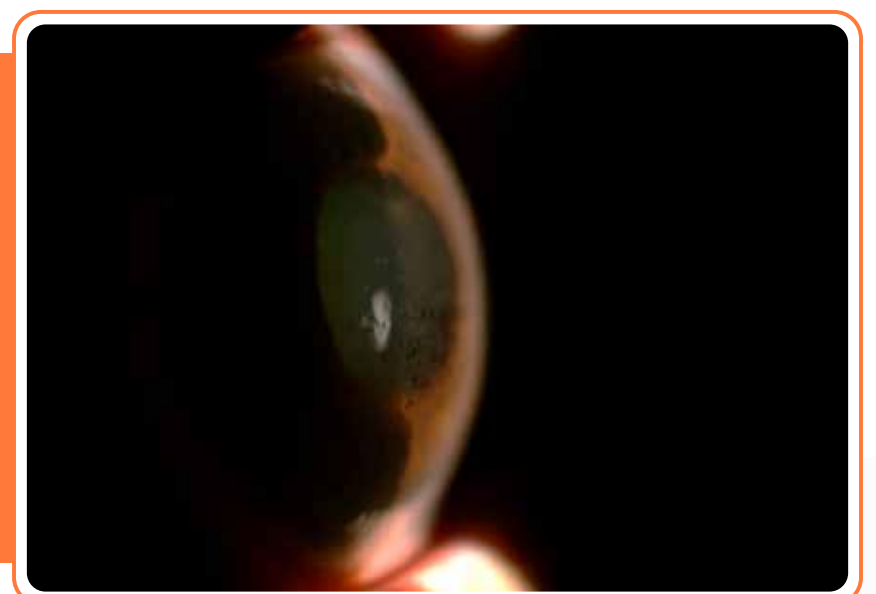
These patients require treatment and followup to prevent the worsening of glaucoma.



**Primary angle closure glaucoma may be acute or chronic.**



Acute Angle Closure

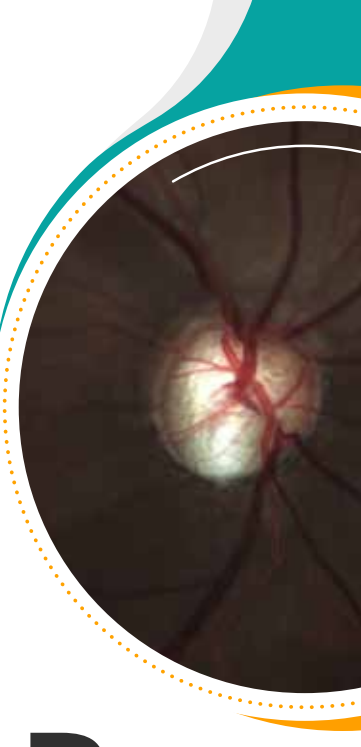


Acute angle closure is a rare condition where there is a sudden increase in eye pressure.

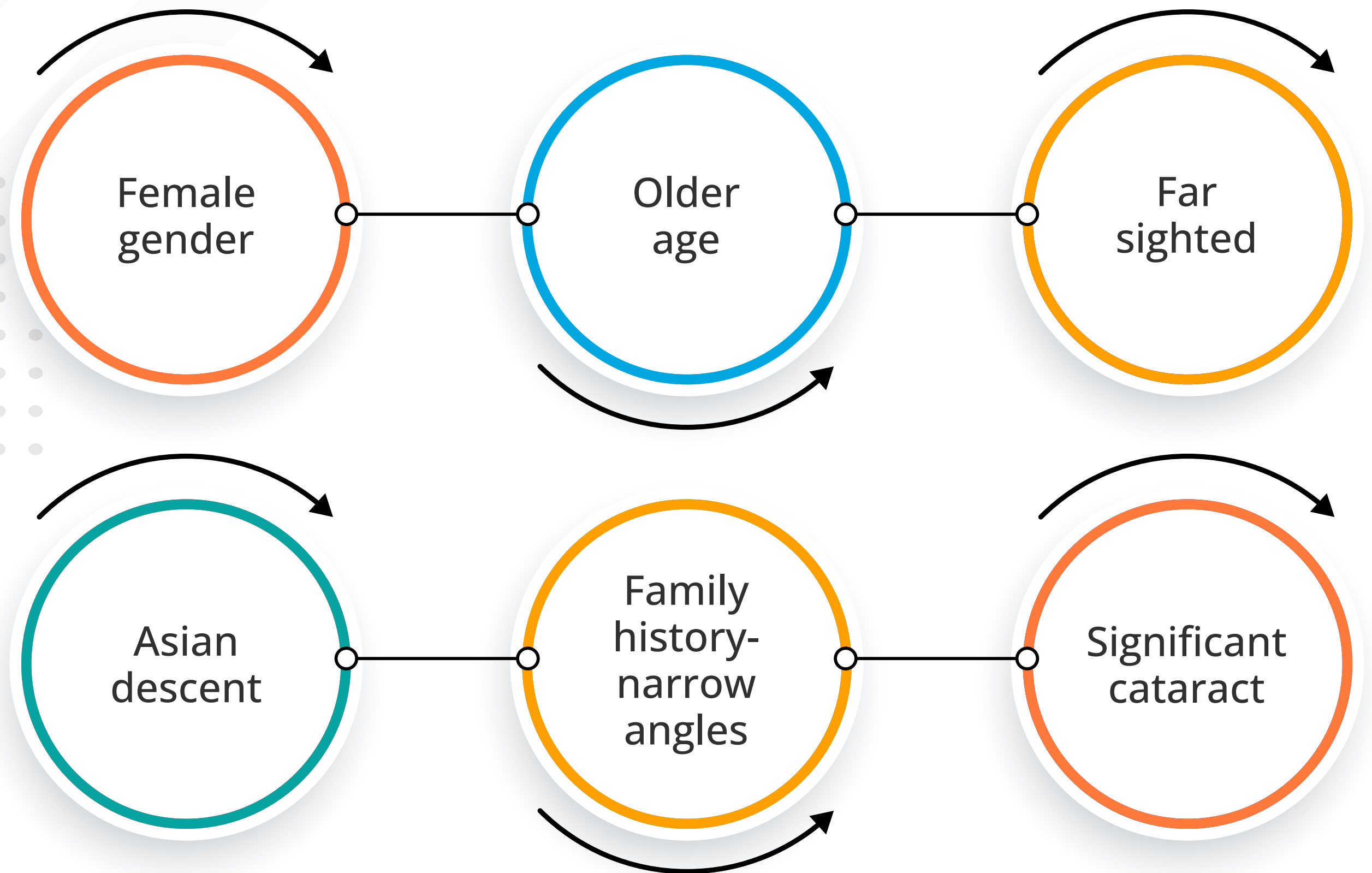
Patient may experience severe eye pain, headache, blurred vision, tearing, and redness.

It is an emergency and needs immediate treatment.

**Most of the time the condition is chronic and without any symptoms.**



# WHAT ARE THE RISK FACTORS FOR NARROW ANGLES?



# WHAT TO AVOID IF ONE HAS NARROW ANGLES?

It is important to avoid dilating drops until you are cleared for dilation by your eye doctor.







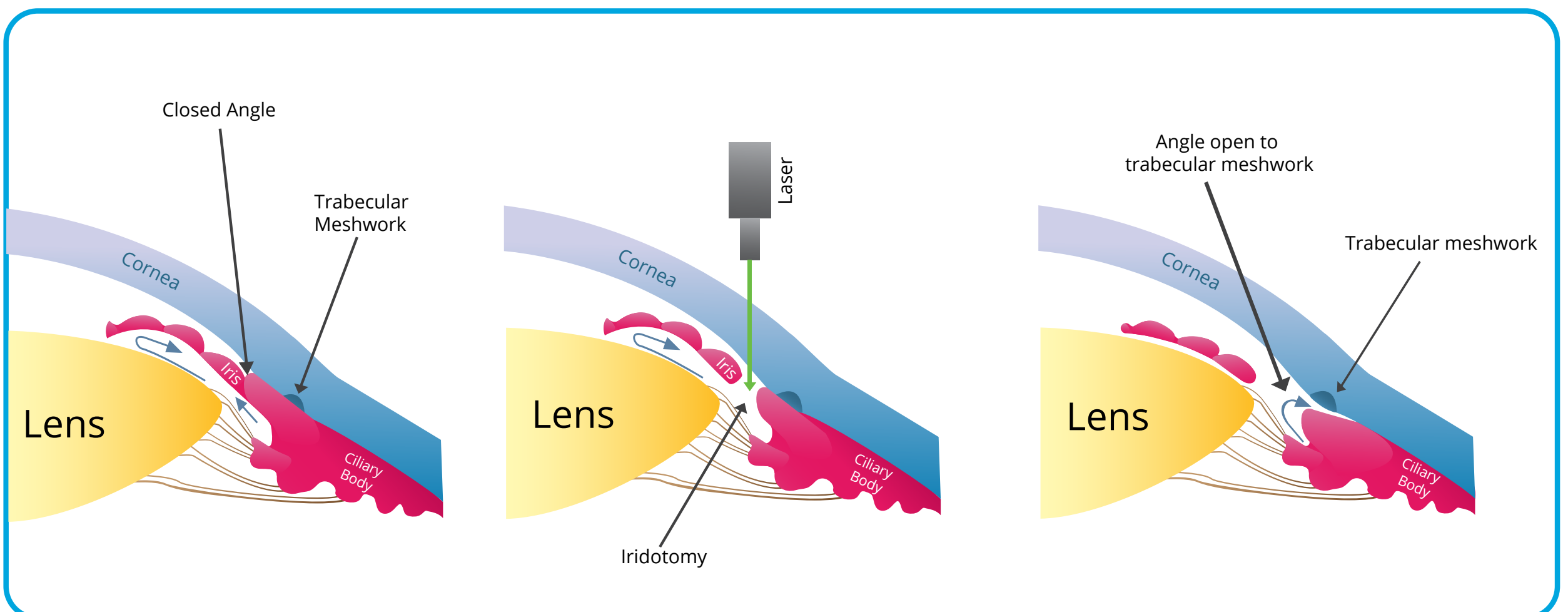
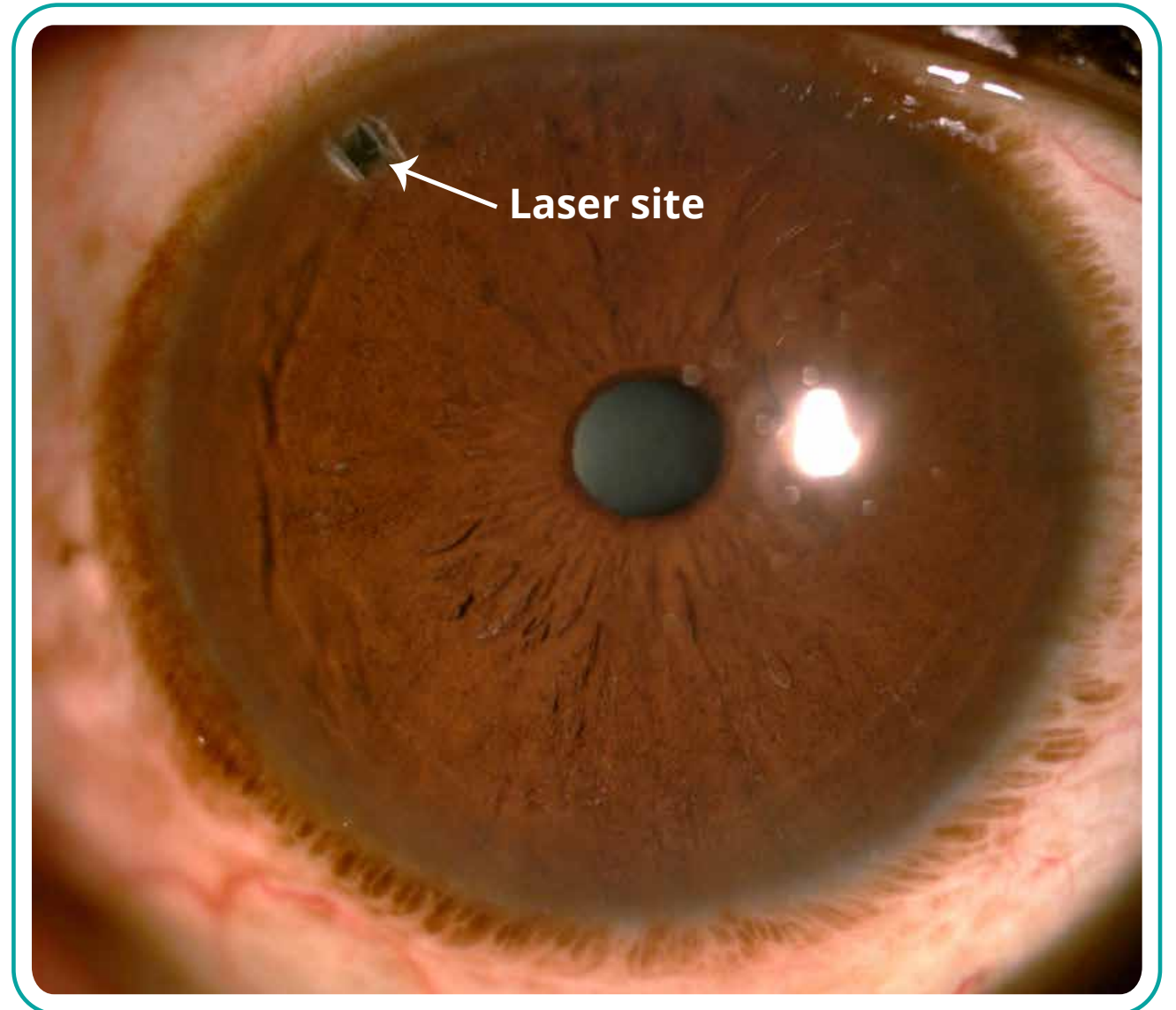
# WHAT IS YAG LASER IRIDOTOMY?

YAG laser iridotomy is an outpatient procedure done for narrow/closed angles.

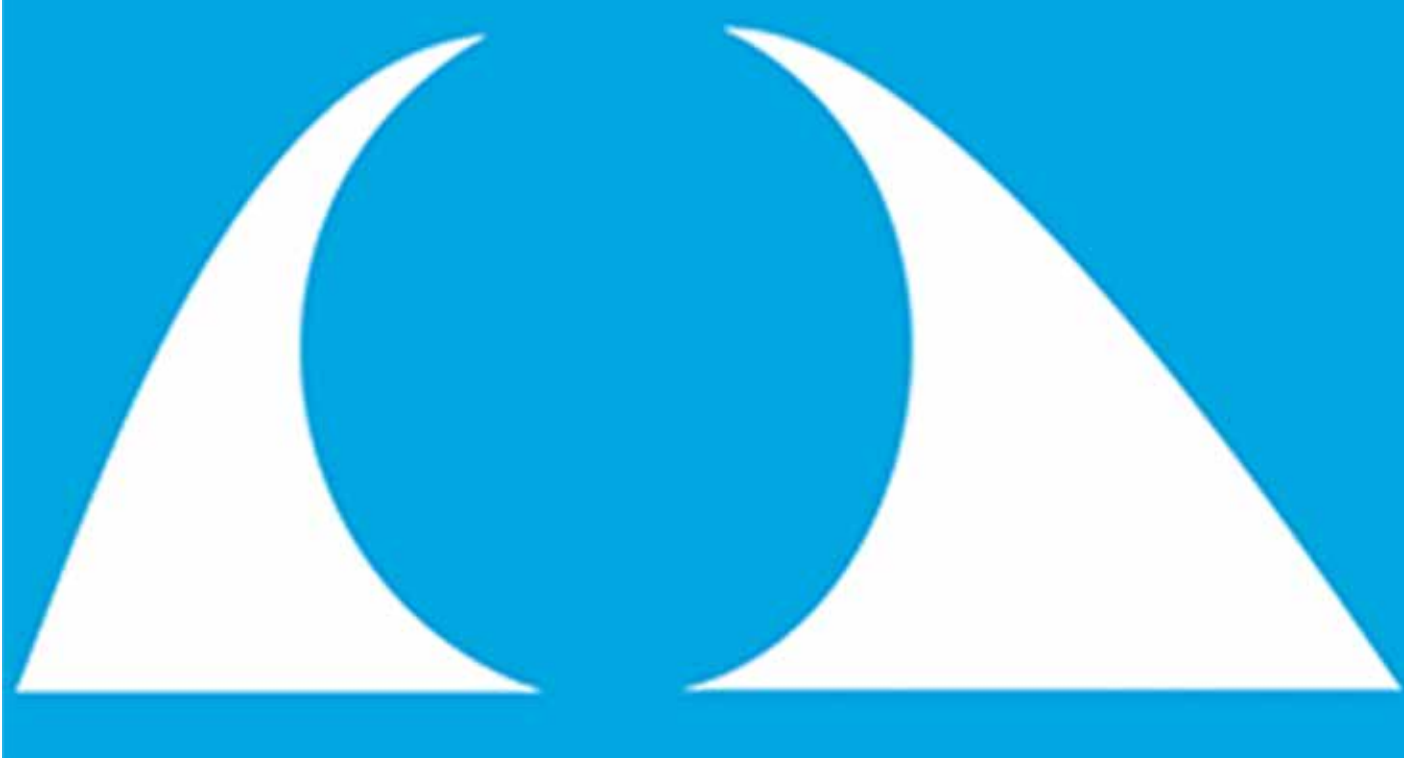
It involves using laser light to make a small opening in the iris (colored part of eye), to allow the fluid, which maintains eye pressure to drain through the eye.

It is not a cure for glaucoma and further treatment may be needed.

Lifelong followup in the glaucoma clinic is needed even following laser.



**SANKARA  
NETHRALAYA**



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