



Neovascular glaucoma (rubeotic glaucoma)

This leaflet provides information about neovascular glaucoma, also called rubeotic glaucoma. It explains what causes the condition, how it is treated and how to prevent further damage by controlling your eye pressure.

What is neovascular glaucoma?

It is a serious eye condition where abnormal new blood vessels grow on the iris (the coloured part of the eye) and the drainage structures inside the eye.

These new vessels grow in response to poor blood flow or oxygen supply to the eye.

They can block the eye's natural drainage system, causing a dangerous rise in eye pressure.

This pressure can rapidly damage the optic nerve, which is responsible for vision, and can lead to severe and permanent vision loss if not treated properly and quickly.

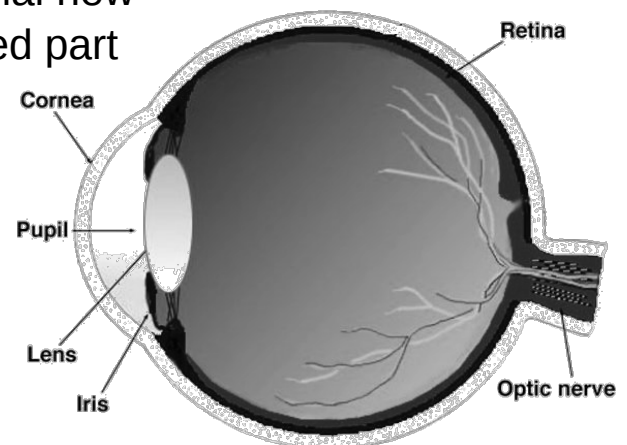


Diagram of the eye

Why is this happening?

Neovascular glaucoma is not usually a condition that starts on its own. It is almost always the result of another underlying problem that affects the blood supply to the eye.

Common causes include:

- Diabetic eye disease (proliferative diabetic retinopathy)
- Retinal vein occlusion (a type of eye stroke)
- Other conditions that reduce oxygen supply to the eye

When parts of the eye are deprived of oxygen, they release signals that trigger the growth of these abnormal blood vessels – a process called neovascularization. These vessels are fragile, abnormal, and can interfere with the eye's fluid drainage, causing pressure to rise. They may also bleed.

Why is it serious?

Neovascular glaucoma is one of the most aggressive forms of glaucoma. It can progress rapidly, and the raised eye pressure can permanently damage the optic nerve, leading to irreversible vision loss or even blindness.

Even if your vision seems fine now, the damage can occur silently and quickly if treatment is delayed or not followed.

If your vision was already poor in this eye, there is a risk this eye could become painful without timely effective treatment.

How is it treated?

Treatment of neovascular glaucoma is made up of 2 critical parts:

1. Treating the underlying cause

To stop the abnormal blood vessels from continuing to grow, we must manage the oxygen shortage in the retina.

This is done with:

- Laser treatment to the retina (pan-retinal photocoagulation – PRP):
 - Laser is applied to the peripheral part (edges) of the retina, to reduce signals triggering the growth of abnormal blood vessels.
 - Because the condition can worsen quickly, we aim to start laser treatment within 1-2 weeks of diagnosis.
 - This is usually done over more than 1 session.
 - If there is not a clear enough view of the retina (for example, following a bleed), then laser might be delayed. In the meantime, an injection into the eye will help buy time until laser treatment can be applied.

- Injections into the eye (Bevacizumab or Ranibizumab):
 - A class of medication called “anti-VEGF”, which directly blocks the action of the signal triggering the growth of abnormal blood vessels (but doesn’t reduce the underlying production of the signal by the retina).
 - We aim to give this within a few days of diagnosis.
 - You may need repeat injection depending on how long it takes to complete the full course of laser treatment.
- Managing systemic conditions like diabetes and high blood pressure.

2. Controlling eye pressure

Even after treating the root cause, you may still need treatment to reduce the intraocular pressure, which is the direct cause of damage to the optic nerve. This may include:

- Eye drops or tablets.
- Laser procedures to the ciliary body (the structure at the front of the eye. Laser energy is applied to reduce fluid production).
- Surgery (such as drainage implants).

Controlling the pressure is vital to protect the optic nerve and preserve vision.

Your treatment plan will be discussed with you. You may not require all of the treatments described above, depending on your individual situation.

Remember, you have a window of opportunity – neovascular glaucoma is serious, but timely and appropriate treatment can save your vision or keep your eye pain-free.

With your cooperation and commitment to the treatment plan, we can manage this condition effectively.

What you can do to ensure treatment is successful

Your active participation in managing your eyes is essential for success.

What you need to do:

- Use all prescribed eye drops and medications as directed.
- Attend all scheduled appointments, including follow-ups for laser, injections, and pressure monitoring.
- Seek urgent attention (attend Eye Casualty or call 111) if you experience:
 - Increasing pain.
 - Sudden vision changes.
 - Redness or light sensitivity.

Seeking urgent attention

Please attend Eye Casualty or call 111.

Eye Casualty (Reading):	Mon-Fri 8.00am to 5pm; Sat & Sun & bank holidays 9am-12.30pm; Closed Christmas Day and New Year's Day.
Eye Casualty: Prince Charles Eye Unit (Windsor):	Mon-Fri 8.00am to 5pm; Sat 8.30am-12.30pm; Closed Sun & bank holidays.

To find out more about our Trust visit www.royalberkshire.nhs.uk

Please ask if you need this information in another language or format.

RBFT Ophthalmology, March 2026

Next review due: March 2028

Treatment plan (use this page to keep track of your appointments and medications)**Appointments** (*delete as appropriate / as required*):

Purpose:	Expected timeframe:	Date:	Location:	Completed (Y / N)
Retinal Laser (PRP) #1				
Eye injection				
APC Clinic (eye pressure review)				
Glaucoma Clinic				
Medical Retinal Clinic				
Retinal Laser #2				

Medications:

Name:	Dose and directions:

Remember to stay well hydrated and keep up your daily potassium intake (e.g. coconut water, within limits, if you are diabetic) if your doctor has prescribed you Acetazolamide tablets.