

Norfolk & Norwich NHS Trust
Ophthalmology Directorate
Vitrectomy Surgery Information for Patients

What is a Vitrectomy?

A vitrectomy is a surgical procedure to remove the vitreous—a transparent gel filling the space between the iris and retina at the back of the eye. This operation is often necessary to allow your surgeon access to the retina to treat various eye conditions.

Why Might You Need a Vitrectomy?

Vitrectomy may be recommended to treat the following conditions:

- **Retinal Detachment:** When the retina separates from the back of the eye, causing vision loss.
- **Macular Hole:** A small break in the macula, the central part of the retina.
- **Epiretinal Membrane:** A wrinkling or scar tissue on the retina.
- **Vitreous Haemorrhage:** Bleeding within the eye.
- **Lens Retrieval:** Following complicated cataract surgery.
- **Significant Floaters:** Persistent, obstructive floaters that affect vision.

Understanding the Retina and Macula

The **retina** is a thin layer of nerve cells lining the back of the eye. It captures light and sends visual information to the brain through the optic nerve. Damage or tears in the retina can lead to partial or total vision loss.

The **macula** is a central area of the retina responsible for detailed vision, such as reading and recognizing faces. Issues in the macula can affect your central, detailed vision.

The Surgery Process

During the procedure:

- The surgeon will make three tiny, self-sealing incisions in the white of your eye while it remains in the socket.
- Instruments are used to remove the gel from your eye, maintain pressure, and provide light so the surgeon can access the retina.
- Once the vitreous gel is removed, the retina can be treated directly.

Duration: Vitrectomy typically takes between 30 minutes and 2 hours, depending on complexity.

Anaesthesia During Surgery

Surgery is most commonly performed under local anaesthesia, with numbing eye drops and an injection around the eye. Some patients feel slight pressure during the injection, which fades quickly. General anaesthesia is rarely required.

Is the Vitreous Replaced?

Since the vitreous gel is not essential in adulthood, it can be safely removed. Afterward, the surgeon may use temporary or longer-term substitutes:

- **Air:** Absorbed within 1 week.
- **Gas Bubble:** Absorbs over 2-8 weeks, gradually improving vision.
- **Transparent Silicone Oil:** Offers longer-term support for complex cases but requires later removal.

Expected Outcomes and Success Rates

The national success rate for primary retinal detachment surgery is approximately **80%**. Success rates for other conditions vary; your surgeon can advise you on what to expect based on your specific condition.

Note: Vitrectomy surgery accelerates the formation of cataracts in most patients, and cataract surgery is often needed within 2 years of the procedure.

What to Expect After Surgery

Following your surgery, your eye may feel sensitive, red, and swollen. You might experience:

- **Gritty Sensation:** A common side effect of the surgery.
- **Discomfort:** Cool eye mask gently laid over the eyelids can help relieve swelling and aching.
- **Medication:** You will be given anti-inflammatory eye drops to reduce inflammation and, if needed, drops to manage eye pressure. These are generally used for around 4 weeks after surgery.

Positioning Instructions

For macular hole and retinal detachment cases, you may need to keep your head in a certain position for a period after surgery. Detailed instructions will be provided.

Follow-Up Appointments

You will be scheduled for a follow-up visit, usually 1-2 weeks after surgery. In some cases, we may need to see you the day after surgery.

Gas or Oil Insertions

If You Have a Gas Bubble

- Vision will be limited while the gas absorbs. You will see a dark shadow moving in your vision until it dissipates.
- **Flying** is prohibited with a gas bubble, as lower air pressure can dangerously raise eye pressure.
- If you require surgery with general anaesthesia, inform your anaesthetist about the gas bubble, as it affects anaesthesia options. You'll be given a yellow wristband with this information.

If Silicone Oil is Used

- **Quicker Visual Recovery:** Unlike gas, silicone oil allows for faster visual recovery, without the need for head positioning or restrictions on flying.
- **Removal Surgery Required:** Silicone oil will not absorb on its own and will need to be removed at a later date.

Risks and Possible Complications

While vitrectomy is generally safe, it has some risks. Severe complications are rare but can include:

- **Infection or Bleeding:** Occurs in approximately 1 in 1,000 cases.
- **Retinal Detachment:** Happens in less than 5% of cases.

Seek help if you experience severe pain, vision loss, or worsening symptoms after surgery.

Do's and Don'ts After Surgery

- **Avoid Strenuous Activities:** Refrain from heavy lifting, exercise, and any activity that strains the eyes.
- **Do Not Rub the Eye:** To avoid infection and complications.
- **Avoid contaminants:** Water and dust may precipitate eye infections
- **Rest and Recovery:** Follow positioning instructions if applicable and take time to rest.

Emergency Contact Information

If you experience any problems following your surgery, please contact the ophthalmology team:

- **Nelson Day Unit:** 01603 288038 (Monday – Friday, 7:30 am – 5:00 pm)
- **Outside Hours:** Call 01603 286286 and ask for the on-call Ophthalmic (Eye) Doctor.

This leaflet is for informational purposes and reflects the current practice for vitrectomy surgery as practiced by Norfolk & Norwich NHS



