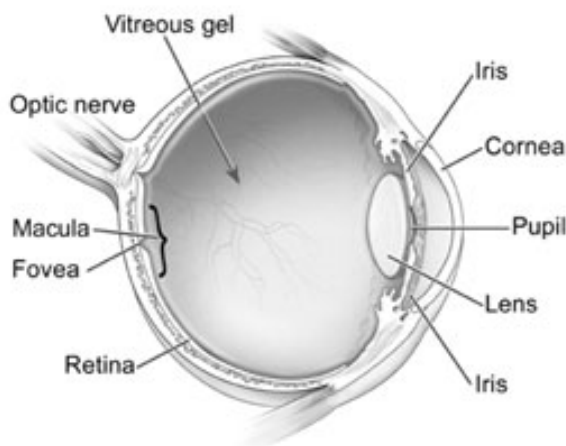


## **Retained lens after cataract**

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### **Structure of the eye**



The eye is made up of two chambers. The front of the eye has the cornea (transparent window), iris (coloured part of the eye) and the natural crystalline lens (or nucleus). The back chamber contains a clear gel-like substance vitreous and retina which lines the inside of the wall of the eye.

### **Why have I been given this leaflet?**

If you have been given this leaflet your lens has likely dropped from the front to the back of the eye, which has caused the vision to be blurred.

### **Why does it happen?**

There are many reasons. It can happen due to trauma. It can sometimes happen due to a congenital weakness in the attachment of the lens to the side of the walls of the eye. Or it can happen if someone encountered a complication during the cataract surgery, which caused the lens to fall to the back.



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### **How will it be treated?**

This will require a surgery called vitrectomy

### **What is a vitrectomy?**

It is an operation using a microscope which is performed by special trained surgeons to remove the jelly-like vitreous that fills the back of the eye. It is performed by making putting little openings into the white of the eye. Very fine instruments are inserted into the eye through these openings and the vitreous is removed.

The absence of vitreous does not cause any permanent harm. It does not grow back, and the space is filled up by natural fluid called aqueous produced by the eye.

### **Will I have a new lens and how will you fix it?**

You will have a new lens in most cases. There are various methods of fixing a new lens. Your surgeon will explain to you in more details.

### **How long does the operation take and do I need to have a general anaesthetic?**

Retinal surgery usually takes about an hour or more, depending on the exact reason you are having the surgery. You will be lying flat on a special bed for the duration of the procedure. It can be performed either using a local or general anaesthetic.

A local anaesthetic injection is given around the eyeball which will numb the eye so that no pain is felt during the procedure. The patient remains awake and comfortable during the procedure. You will not be



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able to see details of what is happening, but you may be aware of bright lights or movement in the operating theatre. If you have the surgery done under local anaesthetic, it is important to keep your head and eye still throughout the surgery. A little clip will be used to keep your eye open throughout the operation, so you don't have to worry about blinking.

The surgery can also be performed under general anaesthetic where you would be asleep for the operation

### **What are the benefits of surgery?**

The benefit of surgery will be to remove the lens from the back and stabilise or improve your vision. Your surgeon will explain the exact reason for the surgery and the chances of success.

### **What are the risks of surgery?**

- 1. Inflammation:** inflammation is a risk common to most operations. As it is expected everyone will have inflammation after their retinal surgery, we will prescribe steroid drops for you to use to treat the inflammation.
- 2. Cystoid macular oedema:** Sometimes after the operation, patients can develop fluid in the back of the eye. This can usually be treated with anti-inflammatory medication, but in a small number of people it does not resolve.
- 3. Further surgery:** patients may require further surgery because of return of the condition or to deal with other complications of surgery such as retinal detachment.

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- 4. Retinal detachment:** this is when the retina comes off the wall of the eye, usually because of a tear in the retina. The eye is checked at the end of the operation for retinal tears and these are treated at the time with laser therapy or cryotherapy (freezing treatment). Despite this, sometimes patients can develop a retinal detachment later. This happens in 10% of patients/ vs 1-2% of patients. The majority of retinal detachments can be repaired, but this requires further surgery and this can potentially lead to severe sight loss.
- 5. High eye pressure/glaucoma:** The eye pressure can go up after the surgery, for example due to the gas bubble in the eye or as a side effect of the steroid drops you will receive. For most people it is a temporary issue and can be controlled with eye drops, preventing any harm coming to the eye. However, 1 in 100 patients can develop persistently high pressure. This can lead to damage to the optic nerve and a condition called glaucoma which can cause vision loss over time. It may require the long term use of eye drops or sometimes glaucoma surgery to control the pressure and reduce the vision loss.
- 6. Sympathetic ophthalmia** – this is a condition where surgery to one eye can cause inflammation in both eyes. This may require strong medications and can result in poor sight in both eyes. The estimated risk of sympathetic ophthalmia after vitrectomy is between 1 in 1000 to 2000 eyes.
- 7. Endophthalmitis** – this is a term we use for an infection inside the eyeball. It may occur between 1 in 1000 - 2000 after vitrectomy and may require treatment in the form of injections or further operations.



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- 8. Choroidal haemorrhage** – this is bleeding between the layers of the wall of the eyeball and may occur in around 1 in 1000 patients. This complication can badly affect vision long-term and further operations may be required.
  
- 9. Permanent loss of vision:** A rare but serious complication is blindness. This occurs due to a serious eye infection called endophthalmitis (1 in 1000 cases) or bleeding during the surgery.
  
- 10. Loss of the eye** – this is very rare. It is mostly performed in cases of painful blind eye.

### **Implications of having gas in the eye:**

If you have gas put into your eye during the operation, you cannot fly in a plane or travel to high altitude (such as a mountain) until the gas bubble has gone. It can take up to 12 weeks for the gas to disappear. This is because when you are at high altitude, the gas bubble can expand causing very high pressure in the eye, resulting in pain and potentially permanent loss of vision.

If you need a general anaesthetic whilst the gas is still in your eye, you must tell the anaesthetist and the team looking after you so that they can avoid certain anesthetic agents which causes expansion of the gas bubble.

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You do not need to worry about these things once the gas bubble has fully absorbed. You will notice the gas bubble shrinking and will be aware when it has completely gone. We will also provide a yellow alert bracelet for you to wear whilst you have gas in the eye as a reminder to yourself and healthcare staff.

### **What will happen on the day of the operation?**

You will have dilating drops put in to make your pupils large so the surgeon can see the back of the eye when they are operating.

You will also be seen by the doctor who will be able to answer any questions you might have. He or she will also ask you to sign a consent form if you have not already done so. They will also put a pen mark to indicate which eye is to be operated on – this can be washed off after the surgery. If you are having a general anaesthetic, you will also be seen by the anaesthetist. If you are having a general anaesthetic, you will have been given instructions on fasting beforehand. Those having the operation under local anaesthetic can eat and drink as normal.

Once you have had the surgery, the eye which has been operated on will be covered with a pad and shield so you will be using your other eye to see. One of the nurses will explain the aftercare and give you medication that has been prescribed.

### **How will the eye feel after the operation?**

The operated eye will feel uncomfortable, gritty, and itchy. It might look red or bruised. This is normal for 7-14 days. You will be given eye drops to reduce inflammation and to prevent infection. You can



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also take paracetamol for pain relief as advised on the packet. Please try not to rub your eye. The vision in your eye will also be reduced initially.

### **What happens after the surgery?**

- You will be given eye drops to use.
- You will have appointments afterwards to make sure things are heading in the right direction.
- You may be asked to keep your head in a specific position for most of the day and night (for 45-50 minutes of every hour) after the surgery. A short break of 10-15 minutes can be taken every hour to allow eating, trips to the bathroom etc. The aim of this is to keep the gas bubble in contact with a specific part of the retina to maximise the chances of treating your condition. Whether you are required to posture, and how long for, will depend on the type of operation you are having, and also the preferences of your surgeon.

### **Do I need to take time off work after the operation?**

We would normally recommend you take at least a week or two off work, particularly if you need to posture. Please ask your doctor who will confirm. We will also be able to provide a sick note if this is required.

### **Can I drive after my operation?**

Your vision in the operated eye may initially be poor if you have had gas placed in the eye. You can legally drive with one eye if this eye



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has good vision once you've had a period of adjustment. The DVLA do not specify what this time period is. If you have gas in the eye, as the gas bubble moves up you will start to see a line in the centre of your vision. Often patients find this distracting and prefer not to drive until it has gone below the centre of their vision.

### **Will I have to get new glasses?**

Most people will need to change their glasses prescription at some point after the surgery. This is normally around three months after the operation. As everyone's recovery is different, please check with your eye doctor before visiting an optician.

### **When to seek help after the operation?**

If you have any problems after your operation, please telephone Eye Emergency. You can also attend A&E if the eye casualty is closed. It is important to seek urgent attention if you develop worsening eye pain or redness, worsening vision, flashing lights, new floaters or a curtain-like shadow in your vision. The contact details will be given to you at the time of discharge.

### **Scientific Evidence**

The advice in this booklet is based on a variety of sources, including latest research published in peer-reviewed scientific journals. It has also been scrutinised by a panel of experts from the Britain & Eire Association of Vitreoretinal Surgeons ("BEAVRS"). If you require further information about this, please ask your surgeon.





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For Questions: