Tan Tock Seng
HOSPITAL
National Healthcare Group

DEPARTMENT OF
OPHTHALMOLOGY

Retinal Detachment Surgery

You have been given this information booklet to help you understand what is the condition called retinal detachment, the risks and benefits, and how to care for your eyes.

What is a Retinal Detachment?

The retina, often referred to as the film of the eye, is the light-sensitive layer of the eye that detects images and sends it to the brain via the optic nerve. Retinal detachment occurs when the retina is lifted off, or separated from, its normal position. When this happens, the retinal tissue starts to become unhealthy. If treatment is not instituted early, retinal detachment can lead to permanent loss of vision.

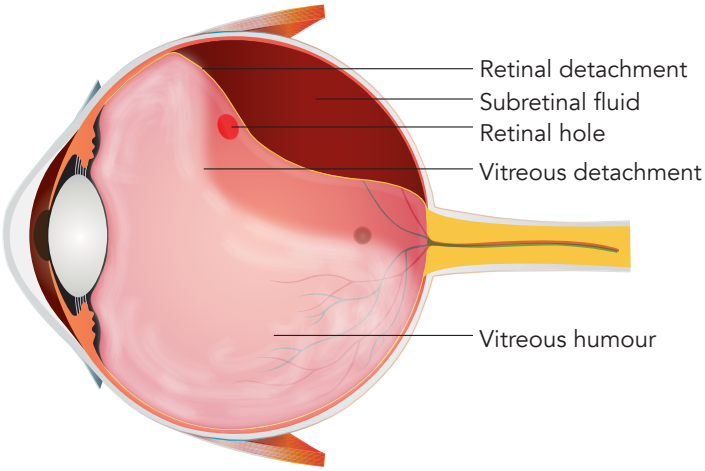


Illustration showing retinal detachment arising from a retinal hole.

What causes a Retinal Detachment?

There are many causes of retinal detachment but the most common cause is a retinal hole or tear with vitreous traction. The vitreous is a clear jelly-like substance that fills the cavity of the eyeball. When the vitreous degenerates it separates from the retina, pulling on the retina. This can cause a retinal hole or tear and allow fluid within the eye to pass through the break and under the retina resulting in a retinal detachment.

What are the symptoms one may experience?

A person may have new onset of floaters, light flashes or 'cobwebs' in the visual field. If these symptoms have been there all along, there may be a sudden or gradual increase in the number of floaters, light flashes or 'cobwebs'. There may also be a sensation of a "curtain" or shadow blocking out part of the vision. This "curtain" or shadow can progress and can cause loss of central vision.

"Curtain" or shadow covering part of vision in retinal detachment.

How common are Retinal Detachments?

The incidence of retinal detachment is one in 10,000 to 15,000 persons. Not all retinal tears progress to a retinal detachment. Your ophthalmologist will examine your eye and recommend treatment as required.

Who is at risk of getting a Retinal Detachment?

- Those aged 40 years and over
- High short-sightedness (myopia)
- Family history of retinal detachment
- Previous retinal detachment in one eye
- Previous trauma to the eye
- Post-intraocular surgery eg. cataract surgery
- Eyes with predisposing peripheral retinal degenerations
- Other eye diseases eg tumours, severe inflammation or complications from diabetic retinopathy.

Can I prevent a Retinal Detachment?

If you have risk factors for a retinal detachment, you may consider avoiding activities where there is a risk of sudden and abrupt movement of the eyes eg. contact sports and roller coaster rides. Attending regular eye examinations can pick up retinal breaks or tears early, allowing laser treatment to reduce the risk of development of retinal detachment.

How are Retinal Detachments treated?

There are many techniques to repair a retinal detachment. Depending on the type of retinal detachment, the retinal specialists will determine the specific procedure to be performed. Sometimes a combination of techniques is used to optimise the outcome of the surgery and improve success rate.

Laser photocoagulation or cryotherapy

- Laser photocoagulation and cryotherapy are used to create a seal around the retinal break or tear and prevent fluid from accumulating under the retina. If there is a retinal detachment, laser photocoagulation is sometimes used to wall off the detached retina and prevent further spread of fluid under the retina. This is usually employed if the retinal detachment area is small and far from the macula, the most sensitive part of the retina responsible for central vision.

Scleral buckle surgery

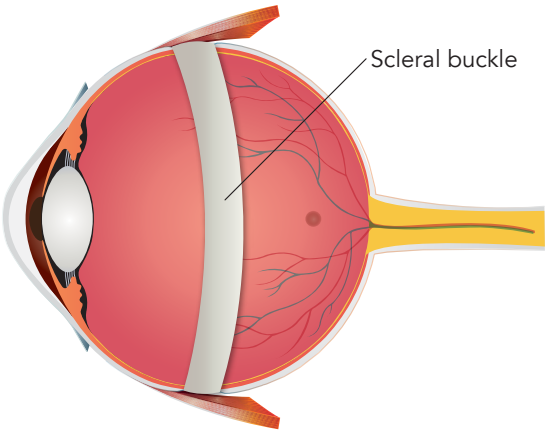


Illustration showing a scleral buckle around an eyeball.

- Scleral buckling involves attaching a synthetic band or segment (usually made of silicone) on the outside of the eyeball to push the wall of the eyeball towards the detached retina, thereby supporting the retinal break and relieving the traction of vitreous gel on the retinal break. Cryotherapy is often performed during the surgery to seal the break. Sometimes air or gas is injected into the eye to support the retina against the wall of the eye. Following the surgery, the surgeon may recommend you to remain in a particular position for a few days to increase the chance of a successful outcome.

Vitrectomy

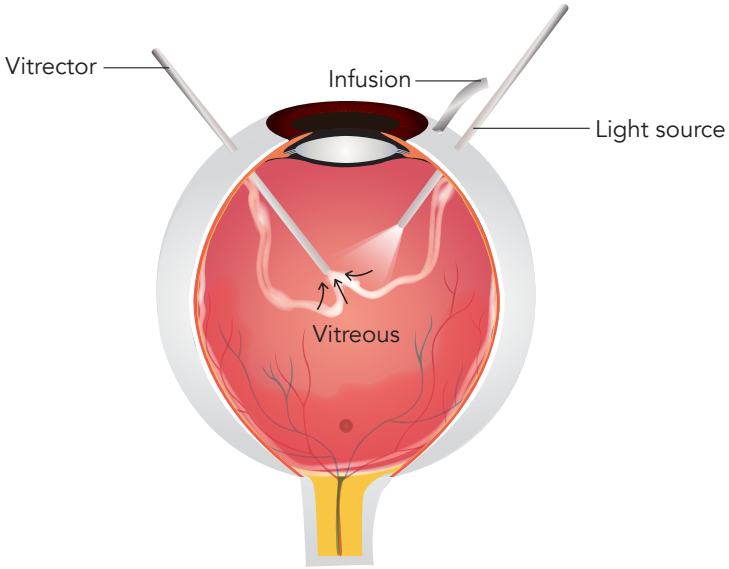


Illustration showing a vitrectomy surgery.

- Vitrectomy is the process of removing the vitreous gel, a jelly-like substance that fills the cavity of the eye. This surgery may be required based on the nature and location of the retinal tear, or presence of tractional membranes. A vitrectomy is performed through three small incisions in the sclera, the fluid under the retina is drained, and laser is applied to the retinal break(s). Often, gas or silicone oil is injected into the eye at the end of surgery to support the retina against the wall of the eye and improve the success of the surgery. If oil is injected, a second surgery is required to remove the oil. If gas is injected it will be gradually absorbed by the eye over a few weeks. Following the surgery, the surgeon may recommend you to remain in a particular position for a few days to increase the chance of a successful outcome.

Pneumoretinopexy

- Pneumoretinopexy is the injection of gas into the eye to support the retina and close the break. Laser photocoagulation or cryotherapy is then applied to seal the break. This procedure is only used for selected types of retinal detachments, usually detachments caused by breaks in the superior retina. Diligent and strict posturing is required to ensure success of this procedure.

Surgical treatment for retinal detachment is successful (anatomical success or retina re-attaching to the wall of the eye) in over 90 percent of cases. Combination of techniques and multiple surgeries may be required in some more complicated cases.

What do I need to do before the surgery?

Before your operation you will be asked to attend a pre-operative assessment clinic where you will be assessed for fitness for surgery. The doctor or nurse will ask a detailed medical and medication history and you may require blood tests and ECG to ensure you are fit for surgery. Should you require cataract removal as part of the surgery, additional tests will be done to calculate the power of the lens implant that is needed for successful cataract surgery.

During this visit we will also explain the details of the surgery and answer any questions you may have. We will also advise you on any medicines you are taking, and if you should stop taking them before your operation especially blood thinners and diabetic medication.

What happens on the day of the surgery?

You will be advised when to stop eating and drinking before the operation. You will be asked to arrive either early in the morning if your operation is to be in the morning, or late morning for afternoon surgery. Normally, one night stay in hospital is required. You may wish to bring an overnight bag with toiletries and a change of clothes. Retinal detachment surgery may need to be performed as an emergency.

What happens immediately after the surgery?

After surgery your eye will be padded with a plastic shield taped over it. The ward nurse will remove the pad and shield the next day, clean the operated eye and instill eye drops for you. She will also show you and your family members the correct way to instill the eye drops and advise you on eye care.

You may experience some effects from the local anaesthetic which include numbness over the injected side of the face, light headache and double vision. These will wear off over the next 1 – 2 days. It is also normal to have some redness, swelling, drooping of the eyelid, and irritation (foreign body sensation) in the operated eye lasting up to 4 weeks. Mild pain may be relieved with analgesics but severe pain, especially if accompanied by headache and vomiting, will require immediate attention.

You will find your vision to be blurred after the surgery especially if you have gas or oil in the eye. Your vision will improve gradually as the gas is absorbed or after the oil is removed. The final visual acuity will depend on the health of the retina.

When can I go home?

After your surgery you will be expected to stay for 1 – 2 hours until you are fully alert. We may recommend you stay in the hospital overnight after the operation depending on the type of surgery, anaesthetic, and any medical condition(s) you may have. As your vision will be blurred in the operated eye, we strongly recommend you have someone to help you home.

When will I need to come back for follow-up appointment?

Your ophthalmologist will want to see you on the following day and a week after the surgery. You will need follow-up at regular intervals at least for a year. Remember to keep your appointments with the doctor as follow-up care is crucial in preventing complications.

How do I care for my eye after surgery?

Here are some instructions on how to care for your eye after surgery:

- Apply the eye drops as instructed by your doctor.
- Maintain the head position advised by your doctor.
- Clean your eyes as instructed twice daily with sterile/clean cotton balls - slightly wet with sterile saline or cool boiled water, and do not allow water to enter the eye.
- Wear the plastic eye shield when sleeping (for 2 weeks).
- You may wash your hair by tilting your head slightly backwards, ensuring that soap and water do not get into the eye (for 4 weeks).
- Protective sunglasses can be worn interchangeably with the eye shield to protect your eye when outdoors.
- The following activities are safe: watching TV, computer work. However, you will need to position your head appropriately if it has been advised.
- You are advised to be careful and remain at home as much as possible after the operation (for 4 weeks or as recommended by your doctor). You may leave the house to visit clean and uncrowded areas.
- There is no restriction on your diet although we would recommend plenty of vegetables and fruits to avoid constipation.

These are the things you should avoid doing:

- Coughing or sneezing too hard (for 2 weeks).
- Water/Soap entering the eyes (for 4 weeks). If it does get in, wash it out by instilling the eye drops prescribed.
- Work (usually 4 weeks hospitalisation leave is given).
- Rubbing/putting pressure on the eye (for 6 weeks).
- Driving (for 6 weeks or as recommended by your doctor).
- Strenuous physical activities, e.g. jogging, tai-chi, swimming, or badminton (for 6 weeks). Light exercise such as walking is safe to do.
- All activity restrictions are subject to your doctor's assessment.

POSITIONING

You may be instructed to maintain a certain position by your ophthalmologist. This is usually required when gas or silicone oil is inserted into the eye. These are the instructions to position your head to ensure optimal outcome of the surgery:

Posturing with vitrectomy pillow.

Posturing with rolled towels.

- If the surgeon recommends you to maintain a certain position, please follow the instructions.
- This position must be maintained at all times except during meal times and toilet purposes.
- You can rent a vitrectomy pillow, or alternatively you may position rolled bath towels to support your head in the recommended position.
- You may use a straw to drink water, so as to maintain the recommended position while drinking.
- The duration of the recommended position will be determined by the surgeon.
- It is important to check with your surgeon before any air travel within 2 months after the operation.

MEDICATIONS

- Eye drops and all medications to be taken as prescribed.
- Most other oral medications can be continued upon returning home.
- However, please note that aspirin, anticoagulants and other antiplatelets should be continued only after consulting your surgeon.

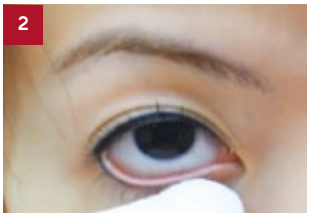
Eye Drop Treatment

• Apply eye drops using the following technique:

1

Wash your hands before applying eye drops/touching the eye.

2



Use cool, boiled water or sterile saline to gently clean the eyelids whenever the eye feels sticky) with a sterile cotton ball.

3

Shake the bottle and remove the cap.

4

Hold the bottle close to the eye without touching the eyelid or eyelashes.

Tilt your head back, look upwards and pull the lower eyelid down.

Instill one drop into the eye.

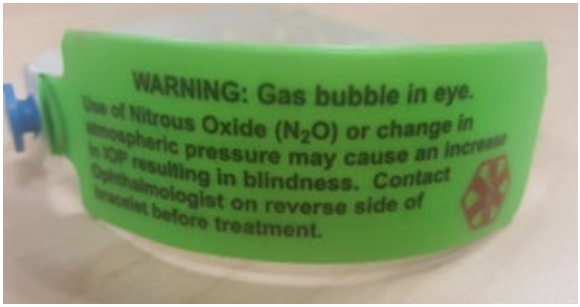
5

Close the eye.

Do not rub the eye.

Gently dab off any excess eye drops.

WRIST BAND



- You may be discharged with a wristband indicating that you have received an intravitreal gas injection.
- Do not remove the wristband until instructed to by your eye doctor.
- If you are admitted, or require surgery for other conditions, show your doctor the wristband.

What can I expect my recovery to be over the next few months?

Over the next 6 weeks you can expect your eye to feel more comfortable, less swollen and less red. Depending on the condition of the eye, your vision should improve gradually over the next 3 – 6 months. Your retinal specialist will gradually tail off your eye drops and in some cases there may be removal of sutures (stitches).

Will my vision recover to what it used to be?

How much the vision recovers will depend on many factors, most importantly whether the macula (most sensitive part of the eye) was detached, the duration of detachment, and the type of internal tamponade (gas or oil) used. Visual recovery to what it was before the detachment is very guarded if the macula was detached or if the detachment was chronic.

WHAT TO DO IN AN EMERGENCY?

Please call us at Tel: 8126 3632 during office hours if you experience the following:

- **Significant pain, not relieved by medication**, especially when accompanied by pain along the forehead, headache, nausea and vomiting
- **Excessive discharge** from the operated eye
- **Deterioration of vision**
- **Flashes of lights and/or floaters**

Office hours:

- Monday – Friday: 8am – 5pm
- Saturday: 8am – 12noon

*Closed on Sundays and Public Holidays.

After office hours, you are advised to seek treatment at the Emergency Department (A&E), Basement 1, Tan Tock Seng Hospital.

Clinic Appointments
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Website: www.ttshlasik.com.sg

Scan the QR Code with your smart phone to access the information online or visit http://bit.ly/TTSHHealth-Library

Was this information helpful? Please feel free to email us if you have any feedback regarding what you have just read at patienteducation@ttsh.com.sg

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