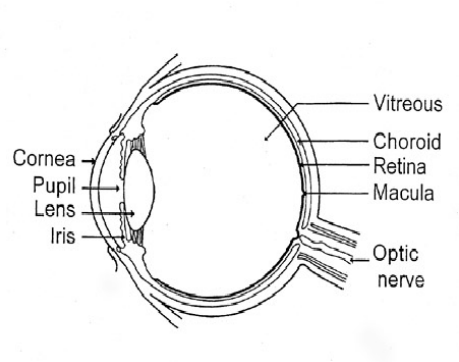
Insight into Retinal Detachment and Vitreo-retinal Surgery

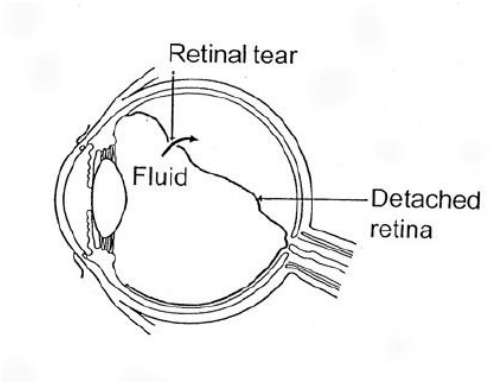
The Retina

The retina is the light-sensitive tissue layer at the back of the eye which transmits the messages to the light rays along the optic nerve to the brain where understanding of what is seen takes place. Light rays enter the eye through the transparent (clear) cornea then pass through the pupil in the centre of the iris (coloured part of the eye). Light must pass through the lens and vitreous (a jelly-like substance) before reaching the retina.



Q. What is a retinal detachment?

A. When a retinal detachment develops a separation occurs between the retina and the underlying inner wall of the eye. This is similar to wallpaper peeling off a wall. The part that is detached (peeled off) will not work properly. The picture that the brain receives becomes patchy or may be split completely. Without treatment, this condition usually leads to blindness in the affected eye.



Q. What are the symptoms of a retinal detachment?

A. People often describe seeing something black or a curtain in their vision. The sudden appearance of floaters and flashing lights requires a full eye examination to exclude the presence of retinal tears that can result in a retinal detachment if left untreated.

Q. What causes a retinal detachment?

A. Nearly all retinal detachments develop because of a hole or tear in the retina. This usually occurs when the retina becomes “thin”, especially in short sighted people or as the vitreous pulls on the retina. Other eye or health problems such as diabetes, cataract surgery and injury such as a blow to the eye, can occasionally be the cause of a retinal detachment.

Q. What is done if the retina is detached?

A. The treatment involves surgery. Retinal holes can be sealed by applying ‘splints’ on the wall of the eye. These ‘splints’ are made of sponge or solid silicone material. They are placed under the skin of the eye and generally stay there permanently. They are not generally noticeable to other people.

Vitrectomy - the retina can also be re-attached from the inside. This operation involves removing the vitreous (the jelly-like substance) and replacing it with a clear substance (gas or silicone oil). This closes off the break in the retina from the inside. The vitreous is cut and sucked out by using very fine instruments and an operating microscope. Tiny stitches are used to close the wound and do not need removal.

Q. Will I have to lie still after the operation?

A. No, the doctor/nurse looking after you will advise you about movement as you may be asked to "posture".

Q. I have not heard of "posturing", what is this?

A. This is positioning your head in a certain way if you have had gas or silicone oil injected during the operation. For the first few days, you must posture as directed. Later you may be able to reduce posturing time as advised by your ophthalmologist. By following the instructions, you will give your retina the best chance to be successfully treated. Your co-operation matters a great deal.

Q. Is there anything that I should not do when I have gas or silicone oil injected?

A. Yes. Initially, you should not lie on your back as the substance in your eye may float to the front of your eye and away from the retina. You should not travel by air if you have had gas injected and the bubble is still present. The depressurisation will cause the gas bubble to expand and your eye to become very painful. Ask the advice of your ophthalmologist.

Q. What happens to the gas and silicone bubbles?

A. If gas is used, it will be absorbed and disappear.The time this takes depends on the type and amount of gas inserted. It is replaced naturally by fluid from within the eye. If silicone oil is used, it remains in the eye until a decision is made to remove it by a small operation.

Q. Will I be able to see properly again?

A. If the operation to reattach your retina is successful you will be able to see again, but the quality of your vision may not be as good as previously. Gas or silicone oil in the eye may mean the retina does not function fully immediately after the operation and recovery of sight can be a gradual process. The final vision depends on the nature of the retinal detachment. If we diagnose and successfully treat the retinal detachment promptly, most of the vision will be restored. If when we detect the retinal detachment, the eye has already poor vision, then some of the sight loss may be irretrievable. You may not be able to read using the

affected eye. From a distance, you may not recognise faces or read number plates on motorcars for example.

The side vision is however, generally preserved. This allows you to detect people and objects approaching you from the sides. This side or peripheral vision is very important for day-to-day activities such as going out or climbing stairs.

You should also be aware that there is a small risk of complications, either during or after the operation.

Some possible complications

Complications generally are not common and in most cases, can be treated effectively.

Very rarely some complications can result in blindness, these include:

- **B**leeding inside the eye (1 in 3000)
- Infection in the eye (1 in 2000) – this complication is called endophthalmitis, is very rare but

can give rise to serious loss of sight.