Patient Information Brochure

Posterior Vitreous Detachment and Retinal Detachment

Q: What is vitreous?
A: The eye is a ball of about 2.5cm diameter. The cornea and lens at the front of the eye focus light onto the retina (Figure 1). The eye is similar to a camera, with the focusing lenses in front, and the light sensitive film (retina) lining the back. The vitreous is the clear gel (jelly) which fills up the space inside the eyeball, behind the iris (the blue or brown part) and the lens.

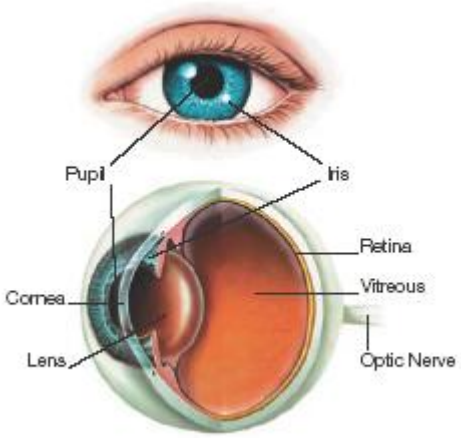

Fig 1. Normal Eye

Q: What is retina?
A: Retina lines the inside of the wall of the eye. The retina transforms light into electrical impulses, which travel up the optic nerve to the brain.

Q: What is Posterior Vitreous Detachment (PVD)?
A: This occurs with age changes in the clear vitreous gel. Parts of the gel become liquid, pushing the remains of the gel forward, a condition called posterior vitreous detachment.

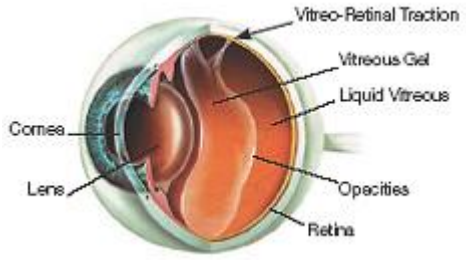

Fig 2. Posterior Vitreous Detachment with traction

Q: What are floaters?
A: At the time of PVD, opacities frequently form at the liquid-gel interface. These are seen as floaters.

Q: Are floaters something to worry about? Will they reduce my vision?
A: They are common, and harmless in themselves. They don't reduce your vision. However, with this degeneration in the vitreous, there is sometimes associated pulling on the retina, as in places the

vitreous is adherent to the retina.

Q: What are flashes?
A: Pulling on the retina causes the sensation of flashes. You can see them even when the eyes are closed and more on moving the eye.If this pulling is severe enough, a hole or tear may occur in the retina. Then liquid vitreous may pass through the hole, peeling the retina off the back wall of the eye, which is a retinal detachment.

Q: What to do if you have floaters and/or flashes?
A:

1. If you have had occasional floaters for years, don't worry. The chance of retinal detachment is small.

2. If you suddenly notice floaters, or experience at sudden increase in floaters, you should have your eyes examined promptly. This examination is to search for any retinal tears.

3. If you develop flashing lights, seen usually at night, again you should have your eyes examined promptly. Flashing lights mean pulling on the retina and the risk of detachment is significant. However there are other possible causes of flashes, one of which is migraine. Nevertheless the sudden onset of flashes demands prompt examination of the retina. Floaters and flashes are warning symptoms which demand prompt examination, but most people who experience them never develop a retinal detachment.

Q: What is retinal detachment?
A: A retinal detachment occurs when the retina peels off the inside of the back wall of the eye. When detached, the retina does not function, so that when part of the retina is detached there is a gap in the vision and when the whole retina is detached the eye is blind.

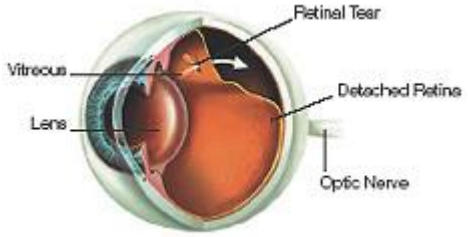

Fig 3. Retinal Detachment

Q: Who is at risk of retinal detachment?
A: Retinal detachment occurs in about 0.01% of the population. Although anyone can experience a retinal detachment, people with certain eye conditions are at increased risk. Some examples of these conditions include **lattice degeneration, myopia (short sightedness), injury to the eye, complicated cataract surgery, etc.**.

Q: What are signs and symptoms of retinal detachment?
A: A retinal detachment is a medical emergency. Retinal detachment itself causes a sudden loss of part or all of the vision in the eye. It does not cause any pain. In many cases, as explained, a retinal detachment is preceded by floaters and flashing lights.

Q: What if my retina shows tears or holes?
A: If a tear is found before a retinal detachment occurs, laser or cryotherapy can be used to weld down the tear and reduce the chance of a later retinal detachment. However a few retinal tears are better left,

a decision which needs to be made by your eye specialist. Treatment of retinal tears causes little or no discomfort and is performed as an outpatient procedure. During laser surgery tiny burns are made around the hole to "weld" the retina back into place. Cryopexy is a similar procedure that freezes the area around the hole.

Q: What is treatment for retinal detachment?
A: All retinal detachments are different, and the characteristics of the detachment determine the type of surgery. In most cases the surgery is done under local anaesthetic, although general anaesthesia may be preferable in certain circumstances.

Q: What is Pneumatic Retinopexy?
A: This technique is reserved for the least complicated detachments. A gas bubble is injected into the vitreous. It prevents liquid from travelling through the retinal tear and thus the retina re-attaches. At the same time or later, either laser or cryotherapy is used to seal the retinal tear to the back wall of the eye. It is necessary to stay in a particular posture for a few days afterwards to keep the bubble in the correct position.

Q: What is Scleral Buckling?
A: A piece of silicone is sutured onto the wall of the eye to counteract the force pulling the retina out of place. This is often combined with draining fluid from inside the eye and with injecting gas.

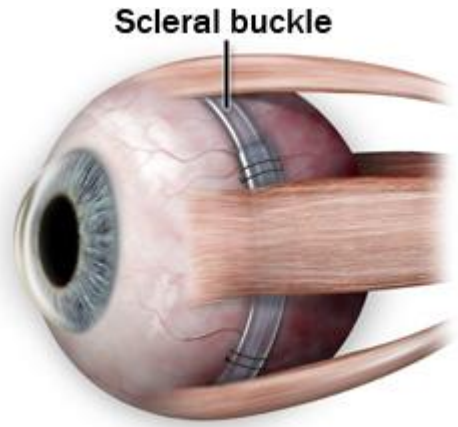

Fig. 4. Scleral Buckling

Q: What is vitrectomy?
A: The vitreous gel, which is pulling on the retina, is removed from the eye. This is usually combined with injection of gas or silicone oil, and often also with a scleral buckle. This combined technique is often reserved for more complicated detachments.

Fig. 5. Vitrectomy Surgery

Q: What are the dos and don'ts after surgery?
A: There is usually some discomfort after surgery. If gas or oil has been inserted, then it may be necessary to assume a particular head position for 3 weeks. Air travel is unwise with a gas bubble in the eye, as the bubble may expand and cause a dangerous rise in the eye pressure. If oil is inserted another small procedure needs to be done after at least 4-6 months to remove the oil.

Q: What are the results of surgery? What about my vision?
A: If the retina can be successfully re-attached, the vision improves. However if the centre of the retina has been detached, the vision may never return fully. The sooner surgery is carried out the better, so it is important to see an eye specialist as soon as you suspect any trouble. Some patients, however, will need more than one procedure to repair the damage.

All photos corrected and two words deleted mentioned in the hard copy