

# Retinal Detachment

You or someone you know may have been diagnosed as having a retinal detachment. This disorder may lead to permanent loss of vision if not properly treated. We have prepared the following explanation to help you understand this condition better.

## How the eye works

Before we can explain about your condition, it is important to understand how the eye works when it is working properly.

## What is a retinal detachment?

A retinal detachment occurs when the retina is pulled away from its normal position, lining the inside wall of the eye. The area of retina that is detached does not see light very well and the vision is blurred or lost. A retinal detachment may progress quickly and lead to complete loss of vision of the eye if not treated.

## Warning symptoms of a retinal detachment

Early symptoms of a retinal detachment may include flashing lights, new floaters, or a gray curtain which moves across your field of vision. These symptoms do not always mean a retinal detachment is present, however, you should see your ophthalmologist as soon as possible if you experience them. Some retinal detachments progress so quickly that the first symptom a patient notices is loss of vision of the eye.

## What causes a "retinal detachment"?

The vitreous is a clear jelly substance that fills the central cavity of the eye. It has the consistency of uncooked egg white and is contained in a form of sac which touches the retina. Through the aging process the vitreous may begin to pull away from the retina at the back wall of the eye. This process is responsible for the symptoms of flashing lights and new floaters and is called a posterior vitreous detachment (PVD). Usually the vitreous separates from the retina without causing any problems. The vitreous may, however, pull on specific areas of the retina hard enough to create one or more retinal tears. The retinal tears may in turn allow the fluid portion of the vitreous to pass through and underneath the retina, lifting the retina off of the back wall of the eye like wallpaper peeling off of the wall. This type of retinal detachment is called a rhegmatogenous retinal detachment and usually requires surgery. Rhegmatogenous retinal detachments are more common with:

- advancing age,
- nearsightedness (myopia),
- previous cataract surgery and YAG capsulotomy,
- glaucoma,
- severe eye injuries,
- previous retinal detachment in your other eye,

- family history of retinal detachment,
- various conditions which weaken the retina, which may be seen by your ophthalmologist.

Retinal detachments other than rhegmatogenous retinal detachments may occur and may or may not require surgery. Your ophthalmologist can distinguish between the different types of retinal detachments with a thorough eye examination.

### **Treatment of retinal tears**

Most retinal tears occurring with a posterior vitreous detachment require treatment, although in some cases the tears can be left untreated and only watched. Treatment of retinal tears usually occurs with laser surgery or cryotherapy (freezing). These treatments usually cause little discomfort and are most often performed in the ophthalmologist's office. The goal of the treatment is to seal the retina surrounding the tear so that fluid does not leak through and lead to a retinal detachment. The treatment starts the healing process immediately, however, the full seal does not occur for up to 4 to 6 weeks and your ophthalmologist may have you limit your activities during that time. Treatment usually prevents a retinal detachment.

### **Treatment of retinal detachment**

There are many ways to fix a retinal detachment. The decision of the type of retinal reattachment surgery and anesthesia depends upon the characteristics of your retinal detachment. Some retinal detachments require urgent or emergent surgery, while others may be postponed for a matter of days or weeks. Some retinal detachments do not require surgery.

1. Scleral Buckle: Your doctor may recommend a scleral buckle operation. This may be performed exclusively or in conjunction with the vitrectomy mentioned below. In a scleral buckle operation your doctor will place a piece of silicone implanted material around all or part of your eye to indent the wall of the eye to counteract the force that led to the retinal tear and retinal detachment. Often your surgeon will drain the fluid underneath the detached retina to allow the retina to settle into its normal position more quickly. This operation is most commonly performed with local-sedation anesthesia (twilight) and may be performed either as an outpatient or inpatient operation.
2. Vitrectomy: During a vitrectomy operation the vitreous jelly, which pulled on the retina to create the retinal tear, is removed from the eye and is usually replaced with a gas bubble. The gas bubble is eventually absorbed by the body and replaced with the eye's own internal fluids. A vitrectomy may be recommended when: 1.) diabetic retinopathy leads to the retinal detachment, 2.) hemorrhage or other opaque material prevents adequate view into the eye, 3.) the retinal tears are very far to the back of the eye, 4.) there is evidence of scar tissue on the surface of the retina, and 5.) in other conditions which may be associated with retinal detachment.

## **After surgery**

Retinal detachments often require six weeks for the retinal tissue to heal into its normal position. The individual photoreceptors (rods and cones that detect the light) may require up to 6 to 12 months to return to their best ability to detect light again. You will probably be asked to limit your activities for up to six weeks following your operation to allow for adequate healing of your eye.

Following surgery your retina specialist will prescribe necessary eye drops to promote healing of your eye. You may need to wear an eye patch for 1 to 4 days for your eye comfort. Your eye should be protected with your glasses or a protective metal shield, which will be given to you, for up to 4 to 6 weeks following surgery.

Most of the time you will be able to resume normal sedentary activities following retina surgery. If a gas bubble was placed in your eye, however, your surgeon may recommend that you keep your head in a special position for days or weeks following the surgery. Also because a rapid increase in altitude can cause a dangerous rise in eye pressure in an eye with a gas bubble, you should not fly in an airplane or travel up to high altitudes until you are told it is safe.

## **Risks of surgery**

Most retinal reattachment surgery is successful with one operation, although a second operation is sometimes needed. Any surgery has some risks, however, an untreated retinal detachment may result in permanent severe vision loss or complete blindness. Some of the surgical risks include infection, bleeding, high pressure in the eye, and cataract, (if you have not already undergone cataract surgery).

## **Visual improvement following retinal reattachment surgery**

The amount and rate at which you get return of vision following retinal reattachment surgery is dependent on many things. If a gas bubble was placed in your eye, you may not see very well until the bubble has been absorbed by the eye and replaced with the eye's own internal fluids. During that time you may see the bubble floating or "jiggling" in your vision. It may occasionally break-up into smaller bubbles, which should not alarm you. Peripheral vision that was lost with the retinal detachment usually returns within several weeks. Any loss of your center vision may return more slowly. You may continue to notice improvement of vision for up to 6 to 12 months following the operation. Unfortunately, some patients do not recover any vision following retinal reattachment surgery. Your doctor will discuss with you your chances of visual improvement with surgery. Eventually, following surgery, you may require glasses, or a change in glasses, to get your best vision.

The more severe the retinal detachment, the less vision may return. For this reason it is very important for you to see your ophthalmologist at the first sign of any symptoms of flashing lights, new floaters, or a "curtain" blocking part or all of your vision.