



RETINAL TEARS AND DETACHMENT

What is a retinal detachment?

The retina is normally attached to the inside wall of your eye, like wallpaper. A retinal detachment occurs when the retina is separated from the inside wall of the eye. The retina will not function when this occurs. If the center of the retina, the macula, is involved, the vision is often extremely blurred. If the macula is not involved, there may be some loss of peripheral vision corresponding to the part of the retina that is detached.

A retinal detachment is a very serious problem that will almost always lead to blindness if not treated.

What causes a retinal detachment?

The center of the eye is filled with a clear gel called the vitreous. As we get older, the vitreous begins to degenerate into a liquid and this causes it to pull away from the surface of the retina. This process, called a posterior vitreous detachment, or PVD, usually occurs without damaging the retina. But in some cases, the vitreous may pull hard enough to tear the retina in one or more places. As time passes, fluid from the center of the eye will pass through the tear and begin accumulating beneath the retina, causing a retinal detachment. There are some conditions that increase the likelihood of developing a retinal detachment. These include:

- Myopia (nearsightedness)
- Prior eye surgery, such as cataract removal
- Traumatic injury
- A history of retinal detachment in either eye
- Family history of retinal detachment

Are there warning signs of a retinal detachment?

Early symptoms of a retinal detachment include flashing lights, new floaters, or a loss of part of the peripheral vision in one eye. These symptoms do not always indicate a detachment is present, but they should be promptly evaluated by your eye doctor.

How are retinal tears and detachments treated?

If your eye doctor discovers a retinal tear, it can usually be treated in the office with **laser surgery** or **cryotherapy**. Both procedures are done to seal off the retina around the tear and prevent the development of a retinal detachment. These procedures are usually performed with little or no discomfort in the office and are highly successful. There are sometimes circumstances where a tear or retinal hole may not require treatment, or cases where despite treatment, new tears or a detachment occurs.

Retinal detachments require surgery to correct. There are several different techniques, and in some cases, a procedure can be done in the office to repair the detachment.

Pneumatic retinopexy is a procedure that can be performed in the office to repair a retinal detachment. Depending on the characteristics of the detachment, this sometimes can be an ideal treatment that avoids the need for a trip to the operating room. This procedure is accomplished by injecting a gas bubble into the center of the eye, where the vitreous gel is located. The bubble then floats up against the tear in the retina, and pushes the retina back up against the wall of the eye. The tear still needs to be sealed with cryotherapy or laser. The gas bubble will dissolve on its own.

Scleral buckle surgery is performed in the operating room and involves placing a flexible band around the outside of the eye to counteract the pulling force of the vitreous gel on the detached retina. This also involves cryotherapy to seal the retinal tear. The band usually remains in place indefinitely.

Vitrectomy surgery also requires a trip to the operating room and involves the removal of the vitreous gel from the inside of the eye. Laser is used to reattach the retina, and a self-dissolving gas bubble is placed inside the eye to hold the retina in place while it heals. The vitreous does not regenerate, but the eye will function normally without it.

Sometimes these procedures are performed simultaneously or sequentially depending on the particular characteristics of the detachment.

Are there risks to surgery?

All surgery has risks, even those performed in the office. However, most retinal tears and detachments that are not treated will result in permanent blindness. Some risks of surgery include, but are not limited to infection, bleeding, cataract, elevated eye pressure, and reoccurrence of the retinal detachment. Fortunately, most retinal tear and detachment repair is successful, even if a second operation is required.