What is a Retinal Detachment?

The retina is the photosensitive tissue in the back of the eye that gives us the ability to see by sending visual signals to the brain. The retina is attached to a layer of supporting tissue below (the retinal pigment epithelial), which keeps the retina in place and provides oxygen and nutrients to the retina. When the retina separates from the supporting tissue, it is called a retinal detachment. There are several types of retinal detachments.

A Rhegmatogenous Retinal Detachment (RRD) is the most common type of retinal detachment and occurs when fluid (liquefied vitreous) leaks under the retina, causing it to lift up and separate from the layer below it. A retinal tear precedes this type of retinal detachment.

A Tractional Retinal Detachment (TRD) occurs when membranes within the vitreous that are attached to the retina contract, pull up on the retina over time and separate it from the tissue below. Conditions that commonly cause tractional retinal detachments are proliferative diabetic retinopathy and proliferative vitreoretinopathy.

An Exudative Retinal Detachment (ERD) occurs when serous fluid (the clear part of blood) builds up under the retina and lifts the retina off the layer below it. The serous fluid comes from a breakdown in the blood-retinal barrier which can occur in people with hypertension or inflammatory diseases of the eye.
Who does it affect and what are the risk factors?

Retinal detachments can occur in either sex and at any age. There are specific factors that increase the risk of a retinal detachment.

**Rhegmatogenous Retinal Detachment risk factors**
1. Retina tear
2. Posterior Vitreous Detachment (PVD)
3. Moderate and high myopia
4. Trauma

**Tractional Retinal Detachment risk factors**
1. Proliferative diabetic retinopathy
2. Scar tissue (proliferative vitreoretinopathy) from earlier retinal surgery
3. Trauma

**Exudative Retinal Detachment risk factors**
1. Inflammatory eye diseases (i.e. posterior scleritis)
2. Vascular disease (i.e. malignant hypertension)

What are the symptoms of a retinal detachment?

Rhegmatogenous retinal detachments are considered to be an ocular emergency and needs to be treated immediately. Permanent blindness can result from any type of retinal detachment that is left untreated. If you experience any of the following symptoms, please call us immediately.

1. Sudden onset of numerous and small floaters
2. Sudden onset of flashes
3. Curtain or shadow coming across your vision
4. Sudden loss of peripheral vision on one side
5. Progressive onset of minimal to severe vision loss

How can the doctor determine if I have a retinal detachment?

The doctor will perform a dilated exam using a slit lamp to determine if you have a retinal detachment that is affecting the macula (the center of the retina). To check the outer retina, the doctor will use an indirect ophthalmoscope. The doctor will order images of your eyes to be taken to precisely document the detachment and how it is affecting your retina.

**Optical Coherence Tomography (OCT)** is a high definition image of the retina taken by a scanning ophthalmoscope with a resolution of 5 microns. These scans are used to document any macular involvement of the retinal detachment and how much fluid is under the retina. The doctor will use OCT images to objectively document the progress of the disease throughout the course of your treatment.

**Ultrasound of the eye (B-scan)** uses sound waves that reflect off the different tissues in the eye to form an image. These images can determine the extent of the detachment and are especially useful for finding detachments when blood obstructs a view of the retina.

What are the treatment options?

When a retinal detachment occurs, surgical interventional is the only treatment possible. Depending on the extent and type of retinal detachment, one or several surgical methods are used to fix the retinal detachment.

1. Pneumatic Retinopexy
2. Pars Plana Vitrectomy with Gas Tamponade
3. Pars Plana Vitrectomy with Scleral Buckle

As with any procedure, there are inherent risks involved with surgery. The doctor will discuss with you in detail which type of surgery he recommends and the risks and benefits of the surgery.