

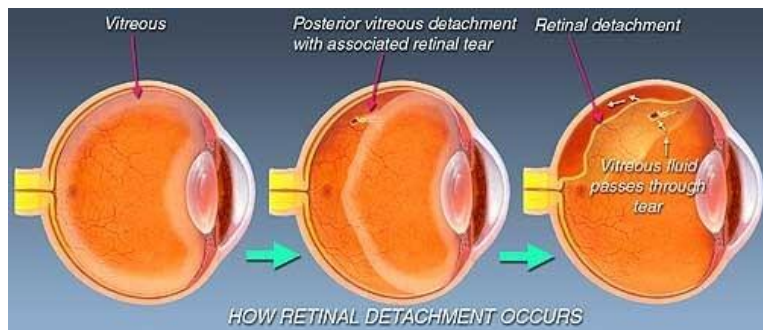
## Retinal Detachment- Patient Resources

### Pathophysiology:

- The neurosensory layer of the retina is the layer composed of light receptors and nerve tissue that relays visual information to the brain.
- Retinal detachment occurs when this layer becomes separated from the retinal pigment epithelium, which supplies the sensory layer with nutrients and oxygen, and regulates fluid accumulation in the space under the retina. The retinal pigment epithelium lies underneath the sensory layer
- There are 4 main types of retinal detachment: Rhegmatogenous, traction, exudative/serous, and traction-rhegmatogenous.
- Retinal detachment affects approximately 12.6 out of 100000 North Americans per year.

### Risk Factors:

- Increased age (>65 years old)
- Severe nearsightedness
- Trauma to the eye (most common)
- Diabetic retinopathy
- Eye surgery
- History (personal or familial)



### Clinical Manifestations:

- Floaters: cobweb, hairnet
- Flashes of white light

Management: There are 4 treatment techniques used to manage retinal detachment:

- 1- Laser therapy: Also known as photocoagulation, this procedure involves the application of laser pulses into the eye. These pulses are directed towards a tear in the retina. The light from the laser is absorbed by and causes scarring in the retinal pigment epithelium and the choroid layer, which secures the retinal tissue to the choroid layer.
- 2- Cryotherapy: This procedure involves the use of a cryo probe on the outside of the eye, directly over a tear in the retina. The targeted area is frozen by the probe, which causes scarring, and adheres the retinal tissue to the choroid layer.
- 3- Scleral Buckle Surgery: This procedure involves the fastening of a silicone band around the eye, over the area of retinal detachment. The external pressure on the sclera allows the retinal tissue to re-adhere to the choroid. In cases of fluid buildup, the fluid is drained before the band is attached to allow the retinal tissue to move back into place.
- 4- Vitrectomy: This procedure involves aspiration of the vitreous humor, and replacement of the humor with a gas bubble. The bubble applies pressure on the retina to keep it in place. The body slowly replaces the bubble with its own fluids with the retina back in place. This can also be done with silicone oil, which must be removed surgically once the retina is healed.

Use of prescribed eye drops is very important for pain management and recovery following any procedure, which may cause blurred vision. Vision will be impaired immediately after the surgery, so patients should arrange transportation to their procedure.