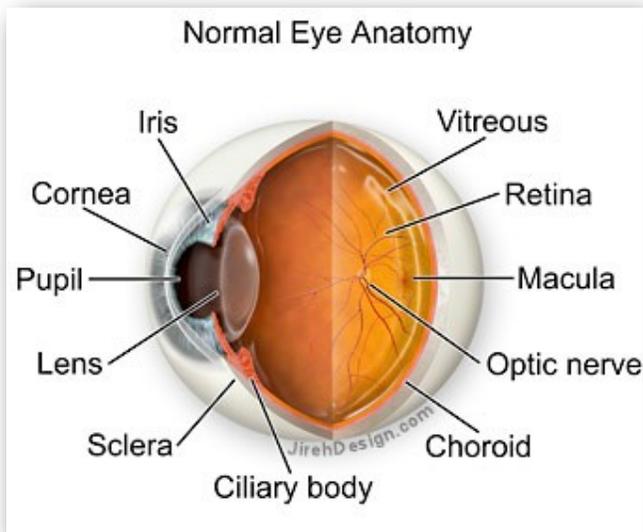


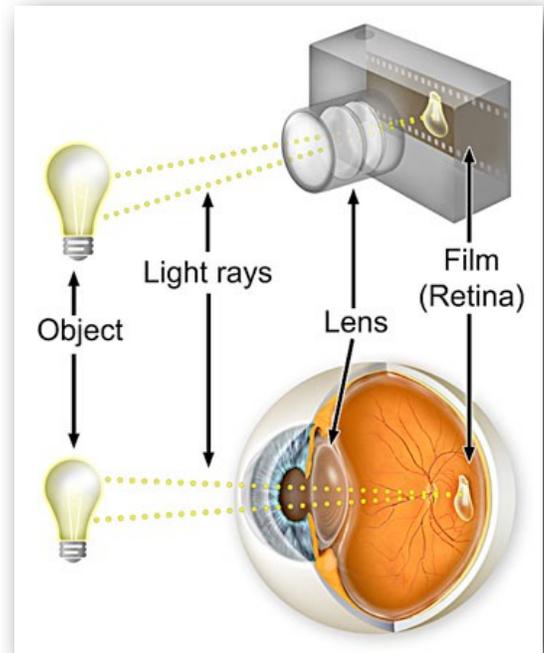
Floaters, Flashes, Retinal Tear



Before we talk about the above problems, it is important to understand how the eye works when it is working properly.

The eye is like a camera. When you take a picture, the lens in front of the camera allows light through and focuses that light on the film that covers the back inside wall of the camera. When the light hits the film, a picture is taken.

The eye works in much the same way. The front part of the eye (the **cornea**, **pupil**, and **lens**) are clear and allow light to pass through. The cornea and lens focus that light on the back inside wall of the eye. Light then passes through the jelly-like substance (called the **vitreous**) in the center of the eye. A thin layer of tissue called the **retina** lines the inside back wall of the eye. The retina is like the film in a camera. It is the seeing tissue. When the focused light hits the retina, a picture is taken. This picture is sent to the brain through the optic nerve. This is how we see.



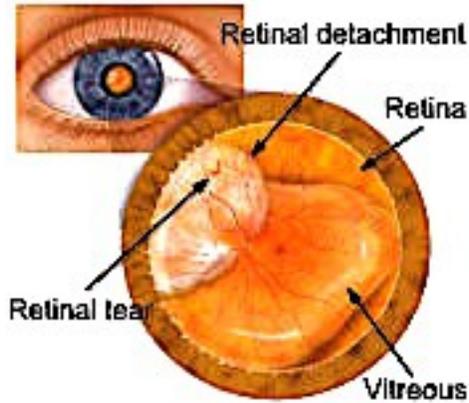
The vitreous gel that fills the inside of the eye becomes more liquid-like as we age. When this happens the gel moves inside the eye, in an opposite direction, every time the eye moves. Often times a person can see the gel-liquid interface as a **floater**, cobweb, string, etc. If the gel tugs on the retina it can stimulate the retina and cause a person to see **flashing lights**. If the gel tugs hard enough on the retina, it can create a **tear** in the retina.

AS WE AGE THE VITREOUS TURNS FROM A GEL STATE TO A LIQUID STATE



VITREOUS TUGS ON THE RETINA CREATING A TEAR IN THE RETINA

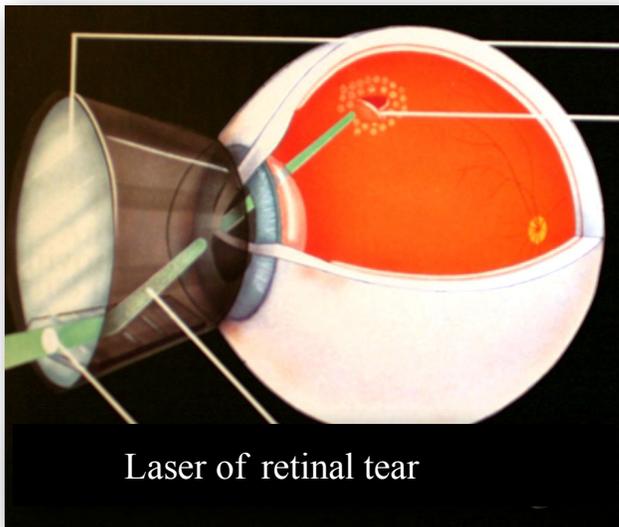
If left untreated, a tear in the retina can allow liquid gel to pass under the retina and peel the retina from the eye wall. When this happens this is called a **retinal detachment**. A retinal detachment can cause a loss in vision or a loss of peripheral vision depending on the location of the retinal detachment.



RETINAL TEAR TREATMENT

The goal of treating a retinal tear is to create an adhesion of the attached retina surrounding the tear to the under-lying eye structure. This can be accomplished in one of two ways.

1. **LASER PHOTOTHERAPY** involves using light energy that is transformed into thermal energy thus causing a reaction of the treated area. This results in an adhesion to form and hopefully will prevent fluid from migrating thru the tear under the retina.

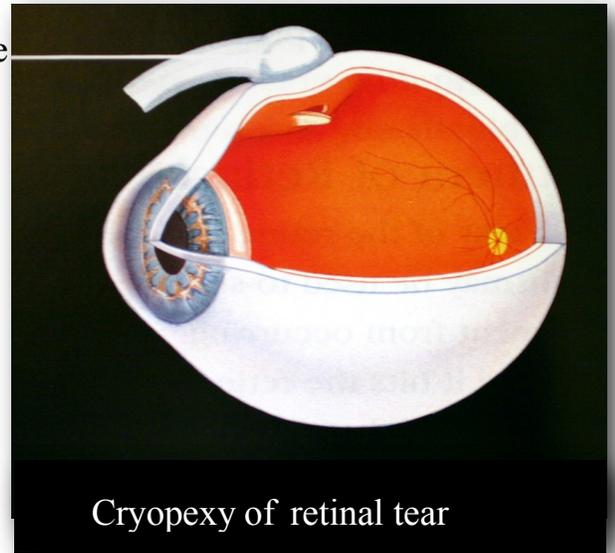


Contact lens
Retinal tear

Laser of retinal tear

2. **CRYOPEXY**, unlike laser, involves a different delivery mechanism and uses cold energy instead of heat to create a reaction.

Cryoprobe



Cryopexy of retinal tear

Both forms of treatment have the same goal, they are just delivered in a different fashion. The doctor will decide which treatment is best fit for a patient's circumstance. Factors that influence the choice are the location of the tear, size of the tear, presence of blood etc. Both treatments are relatively quick and your doctor will explain pros and cons of the treatment selected for the individual patient, as well as what to expect after treatment.

Treatment with laser or cryo will not get rid of floaters or flashing lights. Both serve a single purpose of walling off the tear and preventing a retinal detachment