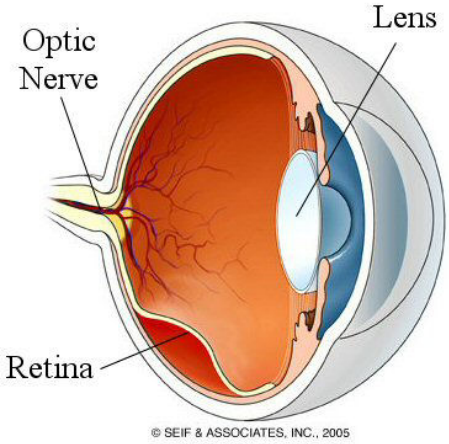
Retinal Detachment

The retina is a thin light-sensitive layer that lines the inside of the back of the eye. The retina changes visual images into nerve impulses which are sent to the brain by the optic nerve to produce sight. It must be attached to the back of the eye in order to function.



All detailed vision and color perception happens at a precise pin size point of focus on the retina called the macula. The other 99.9% of retinal surface is for side vision (what your eye can see just off to the side of what you are looking at).

A detached retina is the separation of the retina from the back of the eye. A total retinal detachment is when the entire retina separates from the layers below it, and includes the macula. This causes complete blindness in the affected eye. It is more common for just a portion of the retina to detach, in many cases leaving the macula in place. When this happens, central, focused vision is maintained, but a portion of side vision corresponding to the part of the retina that detached is lost. This results in a portion of side vision that is black – like a curtain covering a portion of side vision.

CAUSES

- One or many small holes or tears in the retinal surface. These holes and tears allow the fluids inside the eyeball (*vitreous fluid*) to get through the opening and lift the retina up and away from its underlying layers. Since the vitreous fluid is jelly-like in nature and constricts with time, it has the affect of pulling on the retina and can cause holes or tears. People who are very near sighted are at a higher risk for retinal holes or tears.
- Trauma to the eye.
- Certain diseases (diabetes, blood clotting disorders and others).
- Certain physical abnormalities of the eye.

SYMPTOMS

- Flashes of lights that are caused by the vitreous pulling on the retina.
- Floating specks or cobwebs (*floaters*) seen in front of your eye. These may be caused by bleeding in the eye from a hole or tear of the retina.
- A black area or “curtain” that you cannot see through in any part of your side vision.
- Detailed vision becomes fuzzy which may be caused by the vitreous pulling on the macula.
- A floating empty circle in front of your vision which may be caused by the vitreous pulling away from the optic nerve. This is very common and usually does not affect vision (*posterior vitreal detachment*).

DIAGNOSIS

The diagnosis is made with an exam by an ophthalmologist. The pupils of the patient are made larger (*dilated*). Retinal detachment can be more easily found if the detachment is large. If it is small or flat, the detachment may be harder to find. Location of retinal holes and tears need an extremely high degree of training and skill. They may need the expertise of an ophthalmologist who specializes in diseases of the retina. Both eyes should be thoroughly examined since holes or tears may exist in both eyes.

TREATMENT

Treatment depends on the location, size and nature of the retinal detachment.

- Small, localized detachments may be treated on an outpatient basis using a laser.
- Larger detachments need surgery to drain the fluid and use a freezing probe to create scar tissue. The scar

tissue will help make the retina adhere to its underlying tissues once it flattens out.
- Methods also exist which involve the injection of fluid or air into the vitreous cavity.

Visual improvement or return depends on:
- How long the retina was detached.
- Whether or not the macula was involved.
- How well any blood within the vitreous cavity clears with time – and many other factors.

HOME CARE INSTRUCTIONS

- If you have a retinal detachment, and you have not been examined by an eye specialist (either an Ophthalmologist or a Retinal Specialist), you must be examined by one of these specialists as soon as possible.
- Home care instruction should be given by the retina specialist depending on the type of detachment and the surgery or method that was used to treat it.

SEEK IMMEDIATE MEDICAL CARE IF:

- You see the sudden onset of flashing lights, floaters and/or a dark area (like a curtain) in any area of your field of version.
- The dark area of visual loss is in the lower part of the visual field. This means that the upper retina may have detached. Since fluid runs down, the risk is greater in this type of detachment that the fluid may work its way downward to detach the macula. Any detachment that involves the macula makes the risk of permanent visual loss much higher, even with treatment.

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