Retina Information and Treatments

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Illustration by: Parlay International; Surgery on File
Designed and Printed by: Capital Health Audio Visual and Printing Departments

The information in this brochure is provided for information and education purposes only.
The information is not intended to be and does not constitute healthcare or medical advice. If you have any questions, please ask your healthcare provider.

Eye Care Centre
Please bring this booklet to the hospital with you on the day of your operation.

The information in this pamphlet is to be updated every 3 years.
Injection of Bubble
A bubble of gas, air, or oil may be injected into the vitreous space. This will push against the break in the retina and keep it in place. You may not be able to see through the gas bubble.

You may be instructed to lie or sit in such a way so the bubble closes the break and lets the fluid under the retina be absorbed. You may have to lie face down, which is very important for you to remember. Your doctor will tell you how long to stay in a certain position. If you have a gas bubble, you may not travel home by airplane due to changes in air pressure.
The Retina

Light is reflected from an object and enters the pupil. It passes through the lens and jelly-like vitreous onto the retina. The retina is as thin as tissue paper. It changes light into a message which the optic nerve carries to the brain. When the brain receives the message, vision occurs. Change or damage to the retina can cause loss of vision.

Cryotherapy (Cold Treatment)
The eye will be frozen using a needle. A freezing probe is applied to the surface of the eye over the break in the retina. The cold freezes the area around the break. As this area heals, scar tissue forms and joins the layers of the retina.

Surgery

Vitrectomy
A small incision is made to remove the vitreous fluid from the inner eye. Any scar tissue which is pulling on the retina is removed. The vitreous is replaced with another fluid.

Scleral Buckle or Band
A scleral buckle is placed around the eye to close breaks in the retina. You do not see or feel the scleral buckle. Cryotherapy is then done to create a bond between the retina and tissue beneath. Fluid may be drained from under the retina.
Common Problems of the Retina

The amount of vision loss one has will be determined by the area of the retina that is injured. Damage to the central part of the retina causes problems with reading, seeing distant objects and colour vision. Both side and night vision change when the outer regions are damaged.

Far more can be done today to treat problems with your retina, than a few years ago. Different problems need different treatments.

Some common signs of damage to the retina are: sudden flashes of light, floating spots, smoke or cobwebs in your vision, decreased vision, loss of side vision and distorted vision.

Treatments

Laser

Used alone, laser can prevent and stop bleeding, repair holes and tears, and destroy abnormal blood vessels. It can also be used during or after surgery on the retina by making the attachment of the retina stronger. Laser is a highly focused beam of light that creates a tiny burn and "welds" the parted layers of the retina together, or seals leaking blood vessels.

When laser is done before or after surgery, you will be given drops and/or a needle to freeze your eye. Then you will be seated in front of a laser machine in a dimly lit room. You will be asked to look in many directions to allow the doctor to treat different areas of the retina. During the treatment, you may see flashes of bright light that may cause a feeling of warmth or discomfort.
Retinal Holes and Tears
A weak spot on the retina may break as a result of aging or a hard blow to the head. Some people have a higher risk of holes or breaks due to heredity. The breaks may be small and not need treatment.

**Treatments may involve:** Cryotherapy
Laser Treatment

Diabetic Retinopathy
Diabetes may lead to diabetic retinopathy. Changes occur in the tiny blood vessels that nourish the retina. In the advanced stage, new abnormal vessels grow over the inner surface of the retina and may spread into the vitreous. These vessels often bleed into the vitreous, keeping light from reaching the retina. This causes cloudy vision and can lead to retinal detachment.

**Treatment:** Laser Treatment
Surgery/Vitrectomy

Retinal Detachment
When a break in the retina occurs, fluid from the vitreous may seep beneath the top layer and detach it from the wall of the eye. This may occur slowly or very quickly. As the retina pulls away, a shadow may appear, as though a dark curtain has been drawn across the eye.

**Treatment:** Cryotherapy
Laser Treatment
Scleral Buckle
Injection of Bubble

![Retinal Detachment Diagram]
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