fragile, new blood vessels have started to bleed. That is why prevention is the best management.

If the bleeding is severe or the retina is detached, a surgical procedure called a **vitrectomy** may be needed. During a vitrectomy, blood is removed from the center of your eye. A tiny incision is made in the eye. A small instrument is used to remove the blood in the vitreous gel.

Periocular or intra-ocular injection of steroids can also help o reduce the swelling of the retina (macular edema).

Facilities

- Comprehensive eye care
- Vitreo-retinal surgery-for eye haemorrhages, macular hole, infections, epriretinal membranes, retinal detachment, foreign bodies and complicated diabetic eye disease
- Fundus fluorescein angiography-to see leakages in diabetic retinopathy,vascular occlusion, maculopathies, aging eye
- Indirect ophthalmoscopy and slit lamp bi-microscopy-for complete evaluation of retina
- Laser for diabetic retinopathy, vascular occlusion, retinal holes and other macular diseases
- YAG laser for 'after-cataract'
- Cryotherapy for retinal breaks and eye tumours
- Buckling surgeries for retinal detachment
- Glaucoma diagnosis and treatment
- Orthoptic exercises and surgery for squint

Expertise, Technology, Care

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Centre for Retina & Lasers

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Diabetic Retinopathy

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Diabetic Retinopathy

Diabetes is a disease that affects the body's ability to produce or respond to insulin, a hormone that allows blood glucose (blood sugar) to enter the cells of the body and be used for energy. Diabetes affects the small blood vessels of all organs of the body.

The retina is the light-sensitive tissue at the back of the eye. A healthy retina is necessary for good vision. Diabetic retinopathy is a complication of the progression of diabetes, involving abnormality of the small blood vessels, which nourish the retina.

In patients with the onset of diabetes at a younger age (Type 1) the prevalence of retinopathy is 8% at 3 years, 25% at 5 years, 60% at 10 years and 80% at 15 years. Among patients with later onset of diabetes (Type 2) up to 21% have retinopathy at time of first diagnosis and most develop some degree of retinopathy over time.

Initially you may not notice changes to your vision, but over time, diabetic retinopathy can get worse and cause vision loss. Diabetic retinopathy usually affects both eyes.

Vision impairment is a frequent complication of diabetes, for both type 1 and type 2.Severe loss of vision may occur due to bleeding within the eye and moderate loss can occur due to swelling of the retina.

In diabetic retinopathy, weakening of blood vessel walls or leakage from blood vessels occurs. Retinopathy progresses from non-proliferative or background retinopathy to proliferative retinopathy.

Non-proliferative retinopathy is a common, usually mild form that may not interfere with vision but still needs to be monitored or treated. Abnormalities are limited to the retina and usually will interfere with vision only if it involves the macula, the area on the retina that gives us the sharpest vision. If left untreated it can progress to the more serious form, proliferative retinopathy.

Proliferative retinopathy occurs when new blood vessels grow or proliferate in and around the retina. It can cause bleeding into the center of the eye or swelling of the retina, and lead to vision loss.

Nearly all patients who have type 1 diabetes for about 10 years will have evidence of diabetic retinopathy. Other ocular diseases like **Glaucoma, Cataract, and Corneal disease are more common in people with diabetes** and contribute to the high rate of blindness.

The key to preventing diabetes-related eye problems is **good control of blood glucose levels, a healthy diet and good eye care.**

Because a person with diabetes can have retinopathy and not know it, **a regular checkup with an eye care professional is essential**. Regular checkups and a dilated eye examination by a retina specialist can detect the amount and severity of retinopathy early and possibly prevent blindness.

Remember, Proliferative retinopathy can develop without symptoms. At this advanced stage, you are at high risk for severe vision loss. Macular edema can develop without symptoms at any of the stages of diabetic retinopathy.

Don't wait for symptoms. Be sure to have a dilated eye exam at least once a year.

Proliferative retinopathy is treated with **laser surgery.** However it cannot restore vision lost due to the retinal damage. And aims to prevent further damage The procedure is called **Scatter laser treatment or Pan-retinal photo-coagulation (PRP)**. Scatter laser treatment helps to shrink the abnormal blood vessels. Because a high number of laser burns are necessary, two or more sessions usually are required to complete treatment. Scatter laser treatment works better before the