

Diabetic Retinopathy Treatment

In most cases of diabetic retinopathy, treatment is not required, but ongoing observation is still needed.

Laser surgery is the mainstay of diabetic retinopathy treatment. This is usually a clinic procedure that means you don't need to go to the operating theatre. The laser is applied through a contact lens system. During the procedure you will see bright lights in your vision. Someone will need to pick you up from the clinic and take you home. For the rest of the day your vision may be blurred and the eye may feel a little bruised.

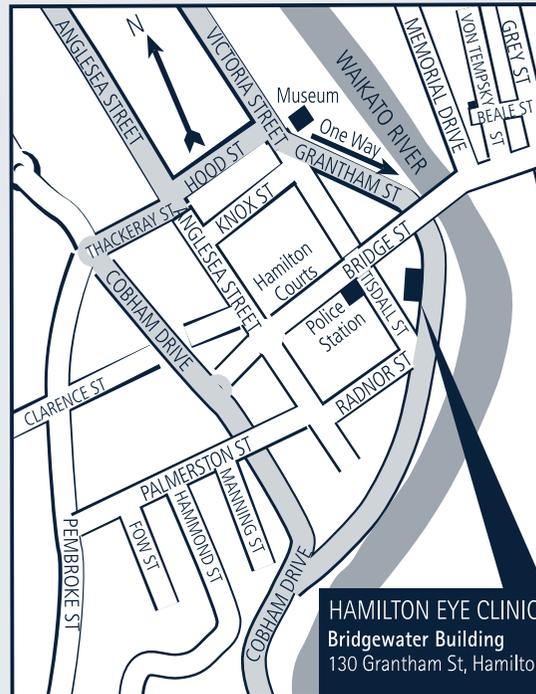
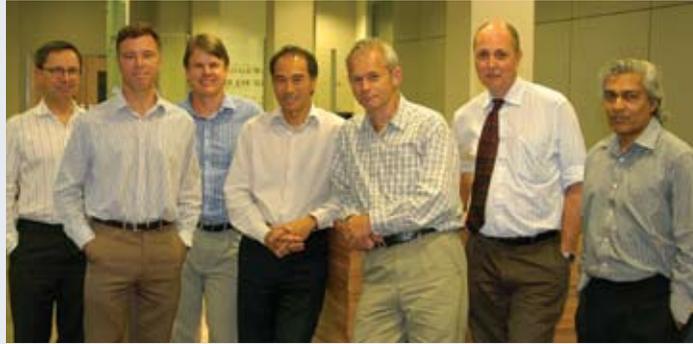


Multiple laser spots applied to the retina to treat proliferative diabetic retinopathy

Injections into the eye of various drugs are occasionally required to stabilize diabetic retinopathy. This sometimes has to be repeated and may be required in conjunction with laser treatment or vitrectomy surgery.

Vitrectomy surgery is occasionally performed on eyes with advanced diabetic eye disease. If you have a lot of blood in the vitreous jelly, removal of the jelly with a vitrectomy will clear away the cloudiness in your vision. Sometimes this surgery is also performed if you have a retinal detachment associated with your diabetic retinopathy. A vitrectomy is usually a local anaesthetic procedure, which means you will be awake at the time, with the eye fully numbed.

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A guide to
**Diabetes
and Diabetic
Retinopathy**

Waikato's Specialist Eye Centre
and Eye Surgery Facility

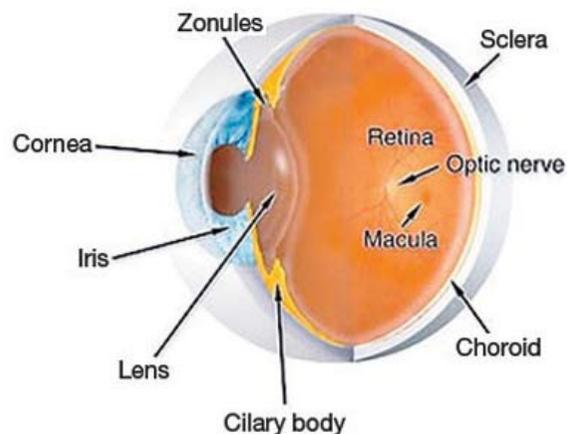


Diabetes and diabetic retinopathy

Diabetes can affect the eye in several ways. It can damage your sight by causing cataract (please see the document on cataracts and cataract surgery), but also more importantly, by causing diabetic retinopathy. The retina is the light sensitive film at the back of the eye which changes light into nerve signals that are then transmitted to the brain. Diabetic retinopathy is a potentially blinding complication of diabetes that affects up to a half of diabetics to some degree. At first you may notice no changes in your vision, but diabetic retinopathy can worsen over the years and damage your sight.

With timely treatment, over 80% of people with advanced diabetic retinopathy can be prevented from going blind. In New Zealand, we recommend every diabetic have an eye exam through dilated pupils at least every two years.

Both type 1 and type 2 diabetics are at risk of diabetic retinopathy. Pregnancy is a relatively high risk period for worsening of diabetic retinopathy and close follow up during pregnancy is recommended.



What is diabetic retinopathy?

Diabetic retinopathy occurs when the small blood vessels in the retina become damaged by high blood sugar levels.

Macular oedema describes the condition where retinal blood vessels develop tiny leaks in the very centre of the retina; in the part called the macula which gives us our fine detailed vision. When this occurs, blood, fluid and lipids leak out causing swelling of the macula.



Small bleeds and areas of blood vessel leakage in an eye with macular oedema. Yellow deposits are lipid.

Proliferative diabetic retinopathy describes the changes that occur when abnormal blood vessels begin growing on the surface of the retina. These new blood vessels have a tendency to bleed or cause adjacent scar tissue growth. Leaking blood from these blood vessels can cloud the vitreous jelly that fills the centre of the eye and cause severe blurring. Scar tissue formation can lead to retinal detachment, which if left untreated often leads to blindness. If these abnormal blood vessels start growing around the pupil you can also develop a diabetic type of glaucoma.

Symptoms

1. Blurred vision and difficulty reading
2. Sudden loss of vision in one eye
3. Dark spots floating around inside the eye

If you have these symptoms, it doesn't mean you definitely have diabetic retinopathy, but you should have your eyes checked. Many people with severe sight threatening diabetic retinopathy have no eye symptoms at all and therefore regular checks are required to allow treatment to be applied before it is too late.

As part of your eye examination, you may occasionally be asked to have special imaging tests performed called OCT scans and fluorescein angiograms.



Patient having an OCT scan.

What you can do to protect your vision

Having regular eye checks every 1 to 2 years is the most important thing you can do. Good blood sugar control and blood pressure control also reduce the risk of developing advanced diabetic retinopathy.