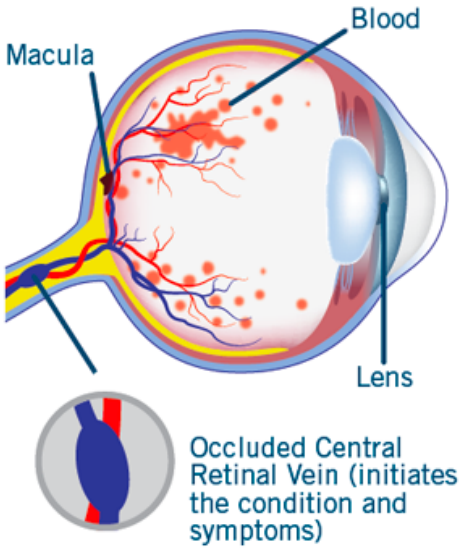
RETINAL VEIN OCCLUSION



What is a Retinal Vein Occlusion?

A Retinal Vein Occlusion is a blockage of one of the veins draining blood from the eye. You can think of this in simple plumbing terms, with blood being pumped in via the arteries and drained out via the veins. If one of the outflow veins is blocked, there is a build up of fluid within the small blood vessels (capillaries) in the eye.

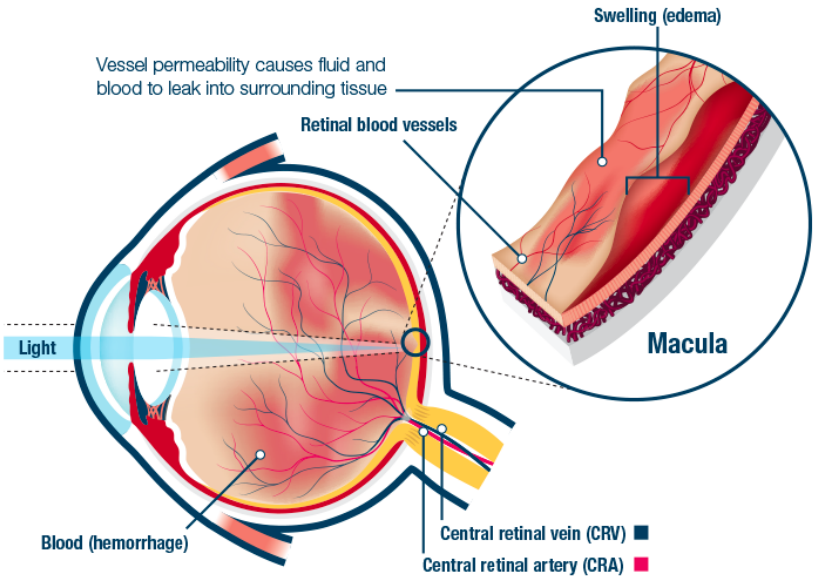
What are the common types of Retinal Vein Occlusion?

Retinal Vein Occlusions may be divided into categories, based on the size of the vein which is blocked.

- A Branch Retinal Vein Occlusion (BRVO) is a blockage of one branch only and affects only part of the retina.
- A Central Retinal Vein Occlusion (CRVO) is a blockage of the main vein and affects the whole retina.

How Common Are They?

Retinal vein occlusions are the second most common retinal vascular disease in Australia, diabetic retinopathy being the most common. The 15 year cumulative incidence of retinal vein occlusion in large population studies is 0.5 to 1.8 % of the population. The chance of it occurring increases with age.



How does a vein occlusion affect my vision?

A vein occlusion can affect the vision in 3 ways:

1.Ischaemia. (Cell death from lack of oxygen)

If there is a very severe blockage and the blood flow stops altogether, the retinal cells die due to lack of oxygen. Unfortunately in these very severe vein occlusions, there is no treatment that can bring the cells back to life, and the affected areas of retina never recover vision. This is fortunately very rare and only occurs in a small percentage of cases.

2.Retinal oedema (swelling)

The increased pressure in the small vessels in the eye results in fluid leaking into the retina, making it swollen and "waterlogged". A swollen retina does not see as well, and the longer the retina remains swollen and waterlogged, the more the vision deteriorates with time. An analogy is a wet carpet – the longer the carpet remain wet and soggy, the more the fibres deteriorate with time. Eventually after many months, the retinal cells die and the damage becomes permanent.

3.Neovascularisation (bleeding)

If the blood supply is not restored to normal within a few months, abnormal new blood vessels can grow into the retina. These new vessels are very fragile and can bleed, resulting in the sudden appearance of a lot of new black floaters or spiderwebs which can dramatically reduce the vision. In some cases this bleeding will require surgery to remove the blood in order to restore vision.

TREATMENT OPTIONS

1.Do nothing.

If the vision is good and the centre of the retina has been spared, sometimes no treatment is necessary. If the centre of the retina is affected and the vision is reduced, then treatment is recommended. Some mild retinal vein occlusions can resolve spontaneously with no treatment over many months. The risk in waiting months before considering treatment however is that the longer the retina is swollen, the more permanent damage is done. Once the retinal photoreceptors have died, there is nothing that can be done to restore the vision. The earlier treatment is commenced, the greater the chance of preserving the vision.

2.Intravitreal injections – Avastin / Lucentis / Eylea / Ozurdex

Intravitreal injections first became available in 2005 and have rapidly become the most common and most successful treatment for retinal swelling due to retinal vein occlusions and other retinal vascular disorders such as diabetic retinopathy and in some patients with macular degeneration.

They work by reducing swelling in the retina. The medicine turns off the leakage of fluid into the retina, and works in more than 90% of people. Each year there are more than half a million eye injections performed in the USA.

3. Laser

Before injections became available in 2005, laser was the most common treatment for retinal vein occlusion. One disadvantage of laser is that it usually cannot be given in the first three months when there are haemorrhages in the retina. If the retinal swelling persists after three intravitreal injection treatments, in some patients, laser may be beneficial.

4. Surgery

In rare cases where there has been bleeding into the vitreous cavity or a membrane (scar tissue) develops on the surface of the retina, vitrectomy surgery is required. This is day surgery only and can now be performed with tiny instruments and sutureless technology.

What can I do to prevent more retinal vein occlusions?

It is very important to see your GP to ensure that your cardiovascular risk factors are under control. This means making sure your blood pressure is well controlled, blood sugars are well controlled, and cholesterol is within the normal range. A healthy low fat diet, exercise and keeping your weight within the normal range is very important. Doing all of these things can reduce your risk of futher events. Even more importantly, keeping these risk factors under control also reduces your risk of heart attack, stroke, kidney problems and many other diseases. Cigarette smoking dramatically increases your risk of further retinal vein occlusions, heart attack and stroke. Stopping smoking is extremely important!

Anti-VEGF injection treatment for retinal vein occlusions

Avastin / Lucentis and Eylea are administered as an injection into the eye. A tiny needle much smaller than a blood test needle is used. Just like a blood test, you do sometimes feel a momentary sharp sensation, but only for a second. A lot of strong anaesthetic eye drops are used, and some people do not feel the needle at all. A lot of antiseptic drops are used to prevent infection, and these do sting and irritate the eye, like salt water at the beach. Some people find the antiseptic drops very irritating and the eye can be very red, watery & irritated for 24-72 hours. Some people feel only minimal irritation for a few hours.

How long does the injection last?

It is important to understand that the medicine is not a cure for a retinal vein occlusion. The injection lasts in the eye for 4-6 weeks, and once it wears off the swelling will often return and re-treatment is required.

How long do I need treatment for?

The aim is to keep the retina dry and the swelling down until the swelling stops recurring. This means treatment with injections every 4-6 weeks until your body recovers, either by re-opening the blocked vein, or more commonly by developing bypass vessels called “collateral vessels” In some people this occurs as early as 3 months. In most people it will occur within 12 months, but in some people the eye never restores normal blood flow and they face the prospect of continuing treatment indefinitely or until newer longer lasting treatments become available. Fortunately there are newer treatments in development that can last many months.

What are the risks of treatment?

There is a small risk of infection in the eye, with any injection procedure. This risk is around 1 in 1000. It is usually treatable if detected early. Rarely a severe infection which does not respond to antibiotics can result in blindness. It is therefore extremely important to contact us if you experience severe pain or vision deterioration.

What happens after the injection?

Hopefully over the week after the injection, you will notice the vision stops deteriorating and in many cases it actually improves. The vision usually improves a little further after each treatment, over the first three months. With regular follow-up, the visual prognosis for retinal vein occlusions is much better than it was even five years ago.

A follow-up appointment will be made in four weeks to check your progress.