

Retinal Vein Occlusion

Retinal Vein Occlusion (RVO) is a disorder of the retina that can lead to vision loss and cause blindness in some patients.

RVO is a blockage of the veins in the retina that carry blood away from the eye. The blockage can cause fluid to leak into the macula – the part of the eye where focusing occurs. The swelling, called macular edema, can cause blurred vision and sometimes complete vision loss.

The blockage caused by RVO cannot be reversed, but there are ways in which it can be managed, using treatment options that may slow down the progression of vision loss and even greatly improve your vision.

Types of Retinal Vein Occlusion

There are two types of RVO:

1. Central Retinal Vein Occlusion (CRVO)

In this type of RVO, the blockage occurs in the main retinal vein. It is the least common form of RVO, but is still a major sight-threatening condition.

2. Branch Retinal Vein Occlusion (BRVO)

The veins in the retina branch out and drain the blood from all areas of your retina. BRVO occurs when one segment of these branched veins becomes blocked. This form of RVO is about five times more common than CRVO.

Symptoms

Symptoms occur only in the eye affected by the disease. Blockage happens without warning and often there are no symptoms, which make it important to get your eyes checked regularly.

Symptoms might include:

- Blurred vision
- Mild to significant vision loss
- Occasional sensitivity to light

Risk Factors

A number of factors can lead to developing RVO. Some are more controllable than others:

- Controllable risk factors
 - Being overweight
 - High blood pressure
 - Diabetes
 - Bleeding disorders
 - Clotting disorders
 - Smoking
 - Lack of exercise
 - High cholesterol

- Uncontrollable risk factors
 - Increasing age
 - Glaucoma

Diagnosis and Treatment

RVO is diagnosed only after a complete eye exam, which is why it is so important to see your eye doctor regularly. If your eye doctor suspects you have RVO, you will be referred to a specialist. At that point, you will be given a full eye exam that may include:

A Visual Acuity Test – using an eye chart, the doctor measures how well you see at different distances.

A Dilated Eye Exam – after dilating your pupils using special drops, the doctor is able to examine your retina and optic nerve for problems by using a special magnifying glass.

Tonometry – the doctor measures the pressure inside of your eyes using a special instrument. Drops may be used before this test to numb your eyes.

Optical Coherence Tomography (OCT) – using a special camera, the doctor takes pictures of your retina. This better helps your doctor to diagnose, treat and manage retinal diseases.

How is RVO treated?

Treatment for RVO can involve a variety of methods, depending on the recommendations made by your specialist. Together, you will determine the treatment method that is best for you. Some methods include:

Anti-Angiogenic Drugs

Vascular Endothelial Growth Factor (VEGF) is a protein that is thought to be a trigger for growth of abnormal blood vessels in the macula, which can result in macular edema and vision loss. Anti-VEGF drugs are injected into the affected eye, sometimes on a monthly basis for two years or longer to help prevent this from happening. The only anti-VEGF therapy currently approved by Health Canada for the treatment of vision loss due to macular edema secondary to RVO is Lucentis (ranibizumab).

Steroid Intravitreal (eye) Implants

Dexamethasone implants contain a very potent steroid that can reduce swelling in the back of your eye, helping to lessen or prevent more damage to the macula. Under general anaesthetic, your doctor will inject a small implant into the back of your eye. Visit the Ozurdex website for more information on intravitreal implants. Ozurdex is currently only approved by Health Canada for the treatment of macular edema following central retinal vein occlusion (CRVO).

Laser Photocoagulation

Using a laser, your doctor will seal areas where leaky blood vessels are affecting your central vision. This slows the leakage of fluid, reducing the amount of fluid in the retina. Laser photocoagulation is not used very frequently due the advent of other treatments.