

# Retinal Vein Occlusions

## What is a retinal vein occlusion?

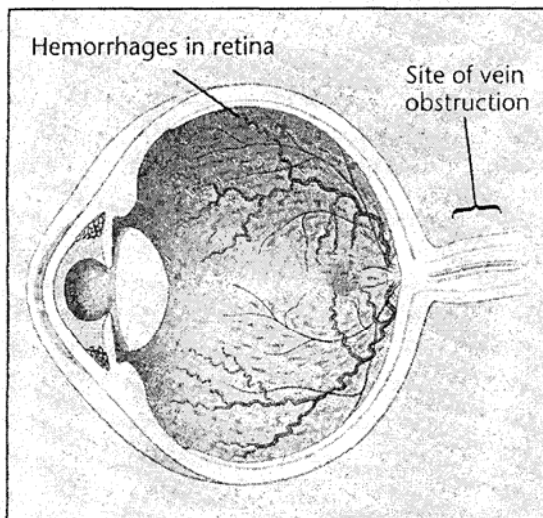
A retinal vein occlusion means that a vein in the retina of the eye has become blocked. The retina is the light sensing tissue at the back of our eye. The veins drain blood out of the retina and return it to the heart.

Blockage or occlusion in the vein prevents adequate blood flow in the affected area. The walls of the vein leak blood and excess fluid into the retina.

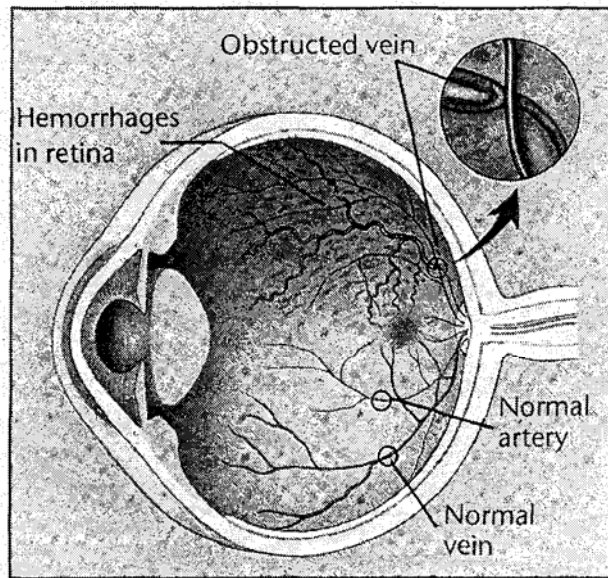
## What are the types of retinal vein occlusion?

There are two types of retinal vein occlusion:

- **Central retinal vein occlusion (CRVO)**
- **Branch retinal vein occlusion (BRVO)**



*Central retinal vein occlusion: The main retinal vein is blocked. Blood flow is poor throughout the entire retina. The amount of visual loss varies but is often severe in older people.*



*Branch retinal vein occlusion: A smaller branch of the main retinal vein is blocked. Only the part of the retina drained by this branch vein is damaged. Vision loss varies but is not as severe as in CRVO.*

## Who is at risk for a retinal vein occlusion?

Retinal vein occlusions are more common in people who have:

- Glaucoma (abnormal eye pressure);
- Diabetes;
- Age-related vascular (blood vessel) disease;
- High blood pressure;
- Blood disorders.

## What are the symptoms of retinal vein occlusion?

*Blurred vision* is the main symptom of retinal vein occlusion. It occurs when the excess fluid leaking from the vein collects in the **macula**.

The macula is the central area of the retina which is responsible for our central, detailed vision. If the macula swells with excess fluid (macular edema), vision blurs.

**Floater**s can appear as spots which interfere with vision. When retinal blood vessels are not working properly, the retina may grow abnormal blood vessels (neovascularization) which are fragile. They can bleed or leak fluid into the vitreous—the gel-like fluid that fills the center of the eye—causing the floaters.

**Pain in the eye** sometimes occurs as a complication of severe CRVO. It is caused by excessive eye pressure called neovascular glaucoma.

### What tests might the doctor order?

After a complete eye examination, your ophthalmologist (Eye M.D.) may order blood tests and/or a test of the retinal circulation called fluorescein angiography. A dye (fluorescein) is injected into your arm and then special photos are taken of the inside of your eye when the dye passes through the blood vessels. Your Eye M.D. may also suggest a visit to your family physician to discover and manage any associated medical problems.

### What treatment is available?

There is no cure for retinal vein occlusion. Your ophthalmologist may recommend a period of observation, since hemorrhages and excess fluid may subside on their own.

**Laser surgery** improves sight in some patients with BRVO and macular edema, but vision does not usually return to normal. Laser surgery is not as helpful in CRVO, but new types of laser surgery are being evaluated.

Laser surgery is very effective in preventing vitreous hemorrhage and neovascular glaucoma. However, it does not remove hemorrhage or cure neovascular glaucoma once they are already present. It is best to treat people at risk for these complications before they occur.

Your Eye M.D. will decide whether laser surgery is appropriate for you. Frequent follow-up examinations are essential. You should make sure that any associated medical condition is treated by your regular physician.

### Why are regular medical eye examinations important for everyone?

Eye disease can occur at any age. Many eye diseases do not cause symptoms until the disease has done damage. Since most blindness is preventable if diagnosed and treated early, regular medical examinations by an ophthalmologist are very important.

Compliments of Your Ophthalmologist

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