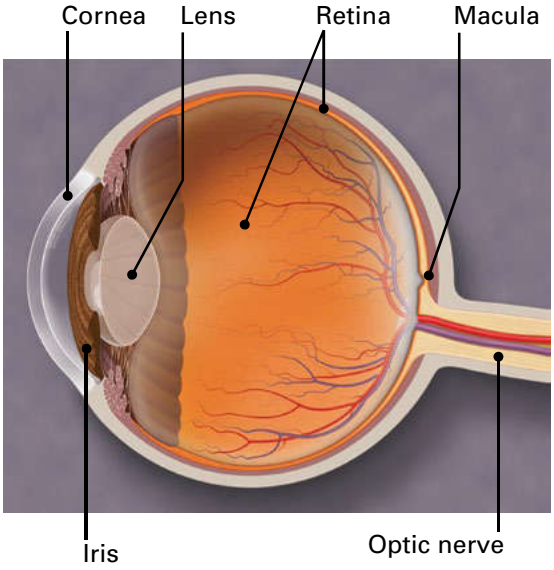
Central Retinal Vein Occlusion (CRVO)

What is central retinal vein occlusion?

Arteries and veins carry blood throughout your body, including your eyes. The eye's retina has one main artery and one main vein. When the main retinal vein becomes blocked, it is called central retinal vein occlusion (CRVO).

When the vein is blocked, blood and fluid spills out into the retina. The macula can swell from this fluid, affecting your central vision. Eventually, without blood circulation, nerve cells in the eye can die and you can lose more vision.



What are the symptoms of CRVO?

The most common symptom of CRVO is vision loss or blurry vision in part or all of one eye. It can happen suddenly or become worse over several hours or days. Sometimes, you can lose all vision suddenly.

You may notice floaters. These are dark spots, lines or squiggles in your vision. These are shadows from tiny clumps of blood leaking into the vitreous from retinal vessels.

In some more severe cases of CRVO, you may feel pain and pressure in the affected eye.

CRVO almost always happens only in one eye.

Eye Words to Know

Retina: Layer of nerve cells lining the back wall inside the eye. This layer senses light and sends signals to the brain so you can see.

Macula: Small but important area in the center of the retina. You need the macula to clearly see details of objects in front of you.

Vitreous: Clear, gel-like substance that fills the inside of your eye. The vitreous helps the eye maintain its shape and also helps send light to the retina.

What causes CRVO?

CRVO happens when a blood clot blocks the flow of blood through the retina's main vein. Disease can make the walls of your arteries more narrow, which can lead to CRVO.

Who is at risk for CRVO?

CRVO usually happens in people who are aged 50 and older.

People who have the following health problems have a greater risk of CRVO:

- high blood pressure
- diabetes
- glaucoma
- hardening of the arteries (called arteriosclerosis)

How is CRVO diagnosed?

Your ophthalmologist will widen (dilate) your pupils with eye drops and check your retina.

They may do a test called fluorescein angiography. Yellow dye (called fluorescein) is injected into a vein, usually in your arm. The dye travels through your blood vessels. A special camera takes photos of your retina as the dye travels throughout the vessels. This test shows if the retinal vein is blocked.

People under the age of 40 with CRVO may be tested to look for a problem with their blood clotting or thickening.

How is CRVO treated?

The blocked vein in CRVO cannot be unblocked. The main goal of treatment is to keep your vision stable. This is usually done by sealing off any leaking blood vessels in the retina. This helps prevent further swelling of the macula.

Your ophthalmologist may treat your CRVO with medication injections in the eye called "anti-VEGF injections." The medicine can help reduce the swelling of the macula. Sometimes steroid medicine may be injected in the eye to help treat the swelling.

If your CRVO is very severe, your ophthalmologist may do a form of laser surgery. This is called panretinal photocoagulation (PRP). A laser is used to make tiny burns to areas of the retina. This helps lower the chance of bleeding in the eye and keeps eye pressure from rising too much.

It usually takes a few months after treatment before you notice your vision improving. While most people see some improvement in their vision, some people won't have any improvement.

To lower your risk for CRVO, you should do the following:

- eat a low-fat diet
- get regular exercise
- maintain an ideal weight
- don't smoke

©2018 American Academy of Ophthalmology
Content last reviewed 09/18

Summary

Central retinal vein occlusion (CRVO) is when the main vein in your retina is blocked. The retina, including the macula, will swell, causing vision loss.

Sometimes a blood clot in the vein causes CRVO. Narrowing of the blood vessel walls can also cause CRVO.

The blockage from CRVO cannot be removed. Instead, treatment aims to keep vision stable. Your ophthalmologist may do laser surgery of the retina or medication injections in the eye. These treatments are done to prevent swelling of the macula, hopefully improving vision.

Get more information about retinal vein occlusion from EyeSmart—provided by the American Academy of Ophthalmology—at **aao.org/retinal-vein-occlusion-link**.

COMPLIMENTS OF:

BRYAN VEKOVIUS, M.D.

OCULOPLASTIC SURGERY AND
NEURO-OPHTHALMOLOGY

450 ASHLEY RIDGE BLVD.
SHREVEPORT, LA 71106

(318) 675-3733

©2018 American Academy of Ophthalmology
Content last reviewed 09/18