



Branch Retinal Vein Occlusion (BRVO)

What is branch 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 branches of the retinal vein become blocked, it is called branch retinal vein occlusion (BRVO).

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 BRVO?

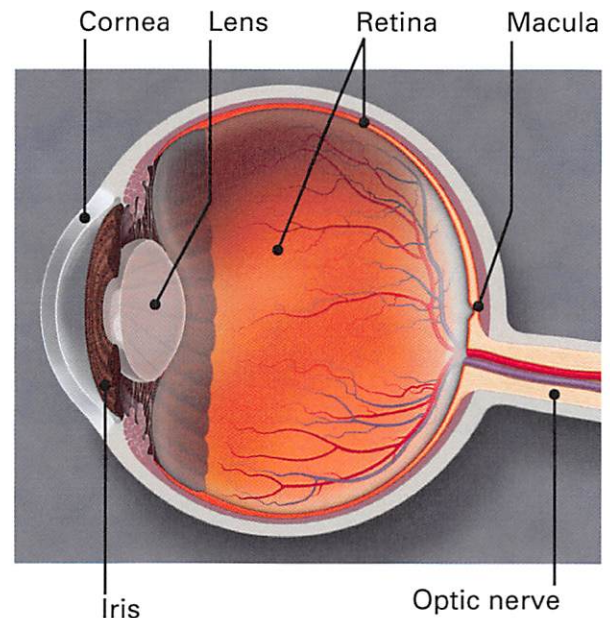
The most common symptom of BRVO is vision loss or blurry vision in part or all of one eye. It can happen suddenly or become worse over several hours or days. Sometimes, you can lose all vision suddenly.

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.

BRVO almost always happens only in one eye.

What causes BRVO?

Many times doctors don't know what causes the blockage in BRVO. Sometimes it can happen when disease makes the walls of your arteries thicker and harder. Those arteries can cross over and put pressure on a vein.



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.

Who is at risk for BRVO?

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

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

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

How is BRVO 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 any retinal blood vessels are blocked.

Also, your blood sugar and cholesterol levels may be tested.

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

How is BRVO treated?

BRVO cannot be cured. 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 do a form of laser surgery called focal laser treatment. A laser is used to make tiny burns to areas around the macula. This helps stop fluid from leaking from the vessels.

Your ophthalmologist may also choose to treat your BRVO with medication injections in the eye. The medicine can help reduce the swelling of the macula. These injections are a type of medicine called "Anti-VEGF." They can improve vision in about 1 of 2 patients who take them. Injections need to be given regularly for one to two years for the benefit to last.

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

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

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

Summary

Branch retinal vein occlusion (BRVO) is when a vein in your retina is blocked. The retina, including the macula, will swell, causing vision loss. Often the cause of BRVO isn't found. Sometimes it is caused by problems from hardening of the arteries.

The blockage from BRVO 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 uveitis from EyeSmart—provided by the American Academy of Ophthalmology—at aao.org/retinal-vein-occlusion-link.

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