

What Is a Stroke Affecting the Eye?

Most people know that high blood pressure and other vascular diseases pose risks to overall health, but many may not know that high blood pressure can affect vision by damaging the arteries in the eye.

A stroke affecting the eye, also known as a retinal artery occlusion, is a blockage in the blood vessels in your retina, the light-sensitive tissue at the back of your eye. The blockage is caused by a clot or occlusion (the narrowing or closure) in a blood vessel, or a buildup of cholesterol in the blood vessel.

There are several types of strokes involving the eye, depending on whether they affect the veins in your eye or the arteries. Veins are the blood vessels that carry blood toward your heart. Arteries are the blood vessels that carry blood away from your heart.

- [Branch retinal vein occlusion \(BRVO\)](#) is a blockage in the small veins in your retina.
- Branch retinal artery occlusion (BRAO) blocks the small arteries in your retina.
- [Central retinal vein occlusion \(CRVO\)](#) is a blockage of the main vein in your retina.
- Central retinal artery occlusion (CRAO) is a blockage in the central artery in your retina.

Symptoms and Risk of a Stroke Affecting the Eye

The most common symptom of a stroke affecting the eye is sudden, painless vision loss. It can affect all of one eye, in the case of CRAO and [CRVO](#), or it can affect part of one eye, in the case of BRAO and [BRVO](#). Other symptoms include:

- Loss of peripheral vision;
- Distorted vision; and
- Blind spots.

Without immediate [treatment](#), vision loss can be permanent.

Who Is At Risk for a Stroke Affecting the Eye?

Men are more likely to have a stroke involving the eye than women. The disease is most commonly found in people in their 60s. Having certain diseases increases your risk of an eye stroke. These include:

- Cardiovascular disease;
- [Diabetes](#);
- High cholesterol;
- High blood pressure; and
- Narrowing of the carotid or neck artery.

Diagnosis of a Stroke Affecting the Eye

If you experience sudden vision loss, you should contact your [ophthalmologist \(Eye M.D.\)](#) immediately. He or she will conduct a thorough examination to determine if you have had a stroke involving the eye. Your Eye M.D. will dilate your eyes with [dilating eyedrops](#), which will allow him or her to examine the retina more thoroughly for signs of damage.

Among the other tests that your ophthalmologist may conduct are:

- Fluorescein angiography. This is a diagnostic procedure that uses a special camera to take a series of photographs of the retina after a small amount of yellow dye (fluorescein) is injected into a vein in your arm. The photographs of fluorescein dye traveling throughout the retinal vessels show how many blood vessels are closed;
- Intraocular pressure (pressure inside the eye);
- Reflexes of your pupil;
- Photos of the retina;
- Slit-lamp examination;
- Testing of side vision (visual field examination); and
- Visual acuity, to determine how well you can read an eye chart.

Treatment of a Stroke Affecting the Eye

Several treatments may be tried. These treatments must be given within a few hours after symptoms begin to be helpful. Treatments include:

- Breathing in (inhaling) a carbon dioxide-oxygen mixture. This treatment causes the arteries of the retina to widen (dilate);
- Removing some liquid from the eye to allow the clot to move away from the retina;
- A clot-busting drug.

Some patients regain vision after a stroke involving the eye, although vision is often not as good as it was before. However, vision loss can be permanent