



RETINAL ARTERY OR VEIN OCCLUSION

In the eye, as in the rest of the body, blood is carried in by arteries and carried out by veins. Inside each eye, there is just one main artery and one main vein to serve all the circulation needs of the retina. These vessels are extremely small, measuring 1/10th- 1/5th of a millimeter. If one of these blood vessels develops a blockage, the retina served by that vessel will not function normally, resulting in loss of vision.

What are the different types of vessel blockages that can occur?

Blockage may occur either in a vessel bringing blood to the eye (the artery), or carrying blood away from the eye (the vein). If only a small branch of the circulation becomes blocked, only a small portion of the field of vision may be affected. This is called a **branch** retinal artery or vein occlusion. If the main or central vessel is blocked, the entire field of vision may be affected. This is called a **central** retinal artery or vein occlusion.

Why do these blood vessel blockages occur?

In many cases, no specific “cause” is identified. These blockages probably develop for the same reason that blood vessels become damaged in the rest of the body. Blood vessel blockages may be more common in patients with high blood pressure, glaucoma, diabetes, certain blood disorders and in smokers. It is also more common in older patients. Your doctor may suggest certain tests to rule out unusual conditions such as blood cell abnormalities, inflammation of blood vessels, or abnormalities elsewhere in the cardiovascular system. These tests are extremely important in ensuring that no other medical problems are present, but in many case, no definitive cause can be identified.

Can these blockages be repaired?

Unfortunately, there is currently no definitive way to reopen a blocked vessel in the retina. In some cases the body may be able to re-open or bypass the blockage through natural healing mechanisms, but the damage done, even with a temporary interruption in blood flow may be permanent.

Can anything be done to improve my sight?

The answer to the question very much depends on the type of blood vessel occlusion which has occurred, and how much of the retina is involved. Certain types of vein occlusions which cause swelling in the part of the retina called the macula (cystoid macular edema) can benefit from a type of laser treatment. Occasionally, surgery or steroid injections may be recommended in severe cases. You should discuss this issue with your doctor.

Are there any complications which can develop following a blood vessels blockage in the retina?

When a vessel in the eye becomes blocked, the retina no longer receives oxygen and nutrients. This causes the retina to send out a chemical signal which causes new blood vessels to grow. While this might seem like a good solution, the new vessels which grow are abnormal—they break open easily and may cause hemorrhage, and they grow in abnormal places within the eye which can result in a sudden, severe increase in the pressure of the eye called neovascular (new blood vessel) glaucoma. Increased pressure in the eye is the most feared complication of a vessel blockage, and can result in severe pain, nausea, and further loss of vision. New blood vessel growth may occur in any type of blood vessel blockage, but is more common in vein than in artery occlusions, and is more common in central than in branch occlusions.

Your doctor will be monitoring your condition over the next several months to watch for the development of any of these problems. If new vessels seem to be developing, a type of laser treatment may be performed which can be effective in treating this potentially serious complication.