VIRGINIA RETINA CENTER

Nonproliferative Diabetic Retinopathy (NPDR)

If you have diabetes mellitus, your body does not use and store sugar properly. Over time, diabetes can damage blood vessels in the retina, the nerve layer at the back of the eye that senses light and helps to send images to the brain. The damage to retinal vessels is referred to as diabetic retinopathy.

Nonproliferative diabetic retinopathy (NPDR), commonly known as background retinopathy, is an early stage of diabetic retinopathy. In this stage, tiny blood vessels within the retina leak blood or fluid. The leaking fluid causes the retina to swell or to form deposits called exudates.

Many people with diabetes have mild NPDR, which usually does not affect their vision. When vision is affected, it is the result of macular edema and/or macular ischemia.

Macular edema is swelling, or thickening, of the macula, a small area in the center of the retina that allows us to see fine details clearly. The swelling is caused by fluid leaking from retinal blood vessels. It is the most common cause of visual loss in diabetes. Vision loss may be mild to severe, but even in the worst cases, peripheral (side) vision continues to function. Laser treatment can be used to help control vision loss from macular edema.

Macular ischemia occurs when small blood vessels (capillaries) close. Vision blurs because the macula no longer receives sufficient blood supply to work properly. Unfortunately, there are no effective treatments for macular ischemia.

A medical eye examination is the only way to find changes inside your eye. If your ophthalmologist finds diabetic retinopathy, he or she may order color photographs of the retina or a special test called fluorescein angiography to find out if you need treatment. In this test a dye is injected in your arm and photos of your eye are taken to detect where fluid is leaking.

If you have diabetes, early detection of diabetic retinopathy is the best protection against loss of vision. You can significantly lower your risk of vision loss by maintaining strict control of your blood sugar and visiting your ophthalmologist regularly. People with diabetes should schedule examinations at least once a year. Pregnant women with diabetes should schedule an appointment in the first trimester because retinopathy can progress quickly during pregnancy. More frequent medical eye examinations may be necessary after the diagnosis of diabetic retinopathy.