

# Diabetes and Retinopathy



Diabetic retinopathy is progressive damage to the eye's retina caused by long-term diabetes. It is a complication of diabetes and a leading cause of blindness. It occurs when diabetes damages the tiny blood vessels inside the retina in the back of the eye.

Diabetic retinopathy is caused by damage to blood vessels of the retina, the light-sensitive outer layer of the eye. It is classified as nonproliferative or proliferative.

- Non-proliferative diabetic retinopathy is the early stage of the disease and is less severe. The existing blood vessels in the eye start to leak fluid into the retina, which leads to blurred vision.
- Proliferative retinopathy is the more advanced form of the disease, and more severe. New blood vessels start to grown within the eye. These new vessels are frag-

If you have diabetic retinopathy, at first you may notice no changes to your vision. But over time, diabetic retinopathy can get worse and cause vision loss.

ile and can bleed (hemorrhage), which may cause vision loss and retinal scarring.

### **Risk factors**

All people with diabetes – both type 1 and type 2 – are at risk for diabetic retinopathy. That's why everyone with diabetes should get a comprehensive dilated eye exam at least once a year

#### Symptoms

Not all people with retinopathy have the following

- Poor night vision
- "Floaters" (spots in front of one's eyes)
- Blurred vision
- Blindness

However, many people have no symptoms before major bleeding occurs in the eye. This is why everyone with diabetes should have regular eye exams.

## Treatment

Proliferative retinopathy is treated with laser surgery. This procedure is called scatter laser treatment. Scatter laser treatment helps to shrink the abnormal blood vessels.

Your doctor places 1,000 to 2,000 laser burns in the areas of the retina away from the macula, causing the abnormal blood vessels to shrink. Because a high number of laser burns are necessary, two or more sessions usually are required to complete treatment.

Although you may notice some loss of your side vision, scatter laser treatment can save the rest of your sight.

Patients who have good control of their blood sugar and blood pressure may improve their outcomes.

If the bleeding is severe, you may need a surgical procedure called a vitrectomy. During a vitrectomy, blood is removed from the center of your eye. Your doctor makes a tiny incision in your eye. Next, a small instrument is used to remove the vitreous gel that is clouded with blood. The vitreous gel is replaced with a salt solution. Because the vitreous gel is mostly water, you will notice no change between the salt solution and the original vitreous gel.

## Preventive Measures

The National Eye Institute urges everyone with diabetes to have a comprehensive dilated eye exam at least once a year.

This lets the doctor see the retina. Frequent eye exams and laser surgery, if necessary, can prevent blindness in most cases.

If you have diabetic retinopathy, you may need an eye exam more often.

Laser surgery may be used to keep vessels from leaking or to get rid of abnormal fragile vessels. A surgical procedure called vitrectomy is used when there is bleeding (hemorrhage) into the eye. Diabetic retinopathy often has no early warning signs. Don't wait for symptoms. Be sure to have a comprehensive dilated eye exam at least once a year to detect the disease before it causes damage to your vision.

People with proliferative retinopathy can reduce their risk of blindness by 95 percent with timely treatment and appropriate followup care.

To prevent progression of diabetic retinopathy, people with diabetes should control their levels of blood sugar, blood pressure, and blood cholesterol.

A major study has shown that better control of blood sugar levels slows the onset and progression of retinopathy. The people with diabetes who kept their blood sugar levels as close to normal as possible also had much less kidney and nerve disease. Better control also reduces the need for sight-saving laser surgery.