



# MDwise

*A McLaren Company*

## Diabetes: Diabetic Retinopathy

Diabetes can harm blood vessels in the retina, the part of the eye that sends images to your brain. This is called diabetic retinopathy, and it can lead to poor vision and even blindness.

You can help prevent or slow diabetic retinopathy by keeping your blood sugar and blood pressure levels in your target range.

### What causes diabetic retinopathy?

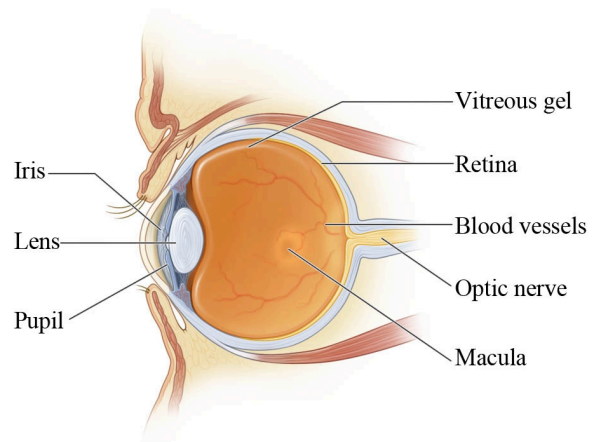
High blood sugar harms tiny blood vessels in the retina. The vessels become weak, which allows protein and other substances to come out of them. Small bulges form in the vessels, and these bulges can break open. New, fragile blood vessels grow on the surface of the retina. These abnormal blood vessels may bleed into the eye, clouding vision and forming scars.

The longer you have diabetes, the more likely you will later get diabetic retinopathy.

### What are the symptoms?

Over time, diabetic retinopathy can cause swelling in the retina, called macular edema. It can also cause the growth of abnormal blood vessels in the eye that easily break and bleed. When that happens, you may see sudden black spots or have cloudy vision.

Diabetic retinopathy can also cause another problem called a detached retina. Later, retinopathy can lead to vision loss or blindness.



You may not notice symptoms until your eye is already very damaged. But your doctor may be able to detect symptoms early and start treatment to prevent vision loss.

### How can you prevent or slow diabetic retinopathy?

You can take steps to help prevent or slow this disease.

- If you have diabetic retinopathy, have thorough eye exams at least once a year. This includes a dilated retinal exam, which allows your doctor to see inside your eye. If you don't have diabetic retinopathy and your yearly eye exam results are normal, your doctor may consider follow-up exams every 2 years instead of every year.
- Tell your doctor about any vision changes right away.

- Check your blood sugar as many times a day as your doctor says. Keep your blood sugar levels within your target range.
- Follow a healthy eating plan. Eat different kinds of foods, and eat the right amount of carbohydrates with each meal. Also limit how much salt you eat to help keep blood pressure at normal levels. A dietitian can help you plan meals.
- Aim for at least 2½ hours of moderate exercise a week. One way to do this is to be active 30 minutes a day, at least 5 days a week. Find an activity you like. This will also help you keep your cholesterol and blood pressure low. Talk to your doctor about what types of exercise are safe for you.
- Take your medicine exactly as prescribed. Call your doctor if you think you are having a problem with your medicine.
- Do not smoke. Smoking raises your risk of many health problems. If you need help quitting, talk to your doctor about stop-smoking programs and medicines. These boost your chances of quitting for good.

## How is this treated?

There is no cure for diabetic retinopathy, but treatment may help prevent vision loss.

Because you may have no symptoms until you have serious eye damage, it is important to catch it early. The earlier retinopathy is detected, the easier it is to treat and the more likely it is that treatment will help you maintain your vision.

**Medicine** that is injected into your eye can help treat swelling in the retina. This is called anti-VEGF (vascular endothelial growth factor) or anti-inflammatory medicine.

**Laser treatment**, or photocoagulation, can prevent vision loss if it is done before the retina is too damaged. It works by removing less important cells in the retina, reducing the need for blood and blood vessels in your eye. The new, weak vessels are no longer formed. Laser treatment may also be used to close leaking blood vessels in the retina. There is a limit to the number of laser treatments you can have. Laser treatment to prevent vision loss works better than laser treatment to treat vision loss.

**Surgery** to remove the vitreous gel, or eye fluid, is called a vitrectomy. Removal of the eye fluid is done when there is bleeding or your retina becomes detached. It may help your vision if the retina is not too damaged. Surgery may also be used to treat severe scars.

**Freezing**, or cryotherapy, may help shrink blood vessels or fix a detached retina. It may be used before laser treatment to clear blood from the fluid in your eye.