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Diabetic retinopathy

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Overview

Diabetic retinopathy is a complication of diabetes that affects the eyes. It is caused by damage to the blood vessels in the light-sensitive tissue at the back of the eye, called the retina.

Diabetic retinopathy (die-uh-BET-ik ret-ih-NOP-uh-thee) can develop in anyone who has type 1 or type 2 diabetes. The risk increases the longer someone has diabetes and if blood sugars are not managed well.

At first, diabetic retinopathy might cause no symptoms or only mild vision problems. But it can lead to blindness, especially if diabetes or other health problems are poorly managed.

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Symptoms

Some people have no symptoms in the early stages of diabetic retinopathy. As the condition gets worse, people may develop:

- Spots or dark strings floating in their sight, called floaters.
- Blurred vision.
- Changes in vision.
- Dark or empty areas in their vision.
- Vision loss.

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Developing diabetes when pregnant, called gestational diabetes, or having diabetes before becoming pregnant can increase your risk of diabetic retinopathy. If you're pregnant, your healthcare professional might recommend additional eye exams throughout your pregnancy.

Contact a medical professional right away if your vision changes suddenly or becomes blurry, spotty or hazy.

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More Information

[Screening for diabetic macular edema: How often?](#)

[Spotting symptoms of diabetic macular edema](#)

Causes

Over time, too much sugar in your blood causes damage to the tiny blood vessels that nourish the retina, cutting off its blood supply. In advanced stages of diabetic retinopathy, the eye tries to grow new blood vessels. These new blood vessels don't develop correctly and can leak or bleed easily.

There are two types of diabetic retinopathy:

- **Nonproliferative diabetic retinopathy.** In this more common form of the condition, also called NPDR, new blood vessels aren't growing.

When you have NPDR, the walls of the blood vessels in the retina weaken. Tiny bulges stick out from the walls of the smaller vessels, sometimes leaking fluid and blood into the retina. Larger retinal vessels can begin to swell and become irregular in width. The condition can progress from mild to severe as more blood vessels become damaged.

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If macular edema affects vision, treatment may be needed to reduce swelling and prevent lasting vision loss. Macular edema can happen in both nonproliferative and proliferative diabetic retinopathy.

- **Proliferative diabetic retinopathy.** Diabetic retinopathy can get worse in this more severe type, also called PDR. Damaged blood vessels close off, causing the growth of new, irregular blood vessels in the retina. These new blood vessels can leak into the clear, jellylike matter that fills the center of your eye, called the vitreous.

In time, scar tissue from the growth of new blood vessels can cause the retina to detach from the back of your eye. If the new blood vessels block the flow of fluid out of the eye, pressure can build in the eyeball. This buildup can hurt the optic nerve, which carries information from your eye to your brain, resulting in glaucoma.

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