

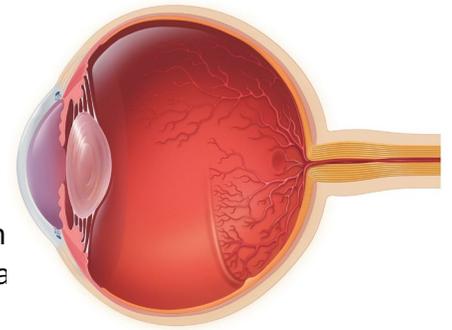
Teach Back: Microvascular Complications

Ask the participants: “Can diabetes cause blindness? Can blindness be prevented in persons with diabetes?” Wait for answers.

4.1 Eye Complications

Let’s begin by recognizing the most important parts of the eye:

- Cornea
- Iris
- Pupil
- Crystalline or lens
- Retina
- Optic nerve



Diabetes may cause “low vision” and blindness due to the following diabetic retinopathy, glaucoma, and cataracts. Smoking worsens a that reason, a person with diabetes should quit smoking.

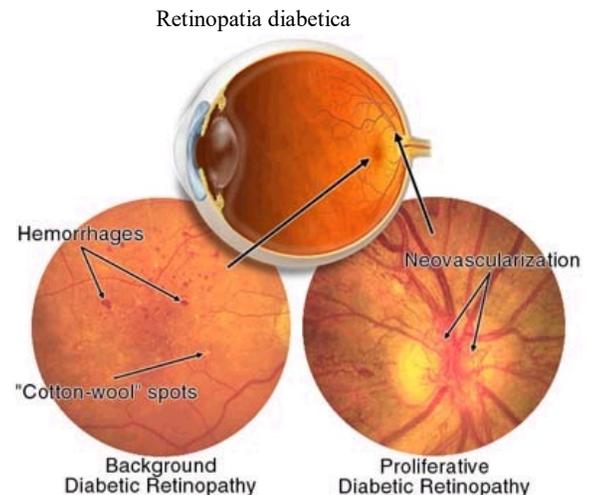
Persons with diabetes are more prone to blindness, particularly those who do not control their blood glucose levels, smoke and/or do not have their eyes examined

Retinopathy

As we have already seen, this word means a problem in the **retina**. This can lead to blindness.

The **retina** is located on the back wall of the eye. It sends information to the brain about the things we see. Tiny capillary arteries irrigate the retina.

The lesion in the retina caused by diabetes is called retinopathy. It can occur when one’s blood glucose level is high for a long period of time. High blood glucose does permanent damage to the small vessels, which tear and

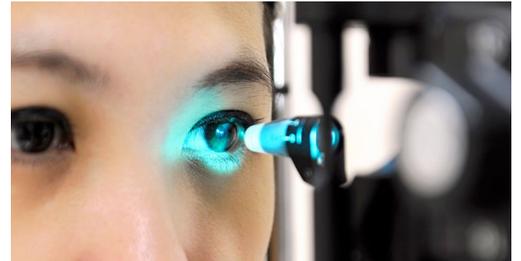


let fluid leak. When these tears form a scar, thickening the retina, the retina loses the capacity to react to light, producing a decrease in the visual field progressing toward blindness.

Retinopathy is one of the main causes of disability in people with diabetes. Retinopathy is more frequent in Hispanic Americans and African Americans over age 40 with type 2 diabetes than among their Non-Hispanic White counterparts.

Glaucoma

Glaucoma is a disease characterized by elevated pressure inside the eye, which causes damage to the optic nerve. This can happen slowly without pain, decreasing vision little by little until the person is blind.



Cataract

Cataract is a condition in which the crystalline or lens of the eye becomes rigid and opaque and loses transparency, blocking and disrupting vision.



Diagnosis and treatment:

The problems of the eye can be detected by an eye specialist, called an **ophthalmologist**, or by the **optometrist**.

The specialist will examine your eyes, first placing some drops in the eyes to dilate the pupils. A person with diabetes must be examined by an eye specialist at least once a year. If a person with diabetes has problems with their eyes, they should be examined by the specialist at least every 6 months. The family or general practitioner should examine the eyes on every visit.

There are treatments for these eye conditions if they are discovered in time. The ophthalmologist oversees the most specialized treatment. Most eye complications require surgery, which can be done quite quickly and with local anesthesia. Lasers burn the abnormal vessels in the retina.

Most people can return home the same day after surgery but must follow the doctor's instructions very carefully to recover well.

Optometrists are trained to detect sicknesses of the eye and can examine your retinas. If the optometrist detects something abnormal, they will send you to the ophthalmologist for medical treatment and surgical treatment.

Review

To reduce the risk of diabetic retinopathy:

- Keep your blood glucose levels under control through medication and by following your meal and exercise plans.
- Maintain normal blood pressure and take medications as indicated.
- Quit smoking if you smoke.
- See an ophthalmologist or optometrist for a complete eye exam with dilated pupils, at least once a year.

The Eye Exam

People with retinopathy who have laser surgery and receive appropriate follow up can reduce the risk of blindness by 90%.

Remember that a person with diabetes should:

- Don't wait until they have symptoms to have their eyes examined.
- Have an eye exam at least once a year.
- Rely only on the ophthalmologist or the optometrist to interpret what is happening inside their eyes.