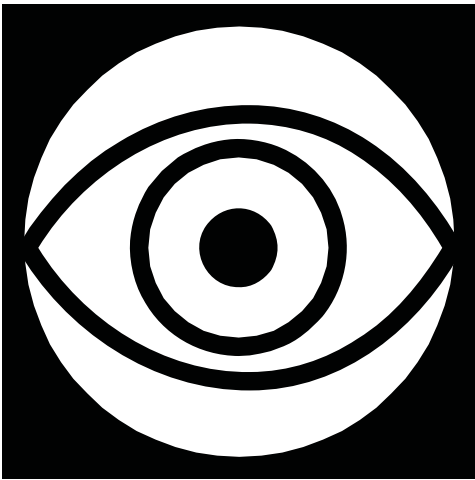


Aging and Vision Loss: Diabetic Retinopathy



Diabetic retinopathy is a complication of diabetes caused by damage to blood vessels in the retina. It is one of the four leading causes of severe vision impairment in older Americans. The risk of developing diabetic retinopathy is greater the longer someone has diabetes. According to the American Academy of Ophthalmology, about 80 percent of people who have had diabetes for at least 15 years have some damage to the retina.

Those who have **Type-I (juvenile onset)** diabetes are more likely to develop the complication at an earlier age than those with **Type-II (adult onset)**.

Early detection of diabetic retinopathy is the best protection against vision loss. People with diabetes are advised to schedule regular, comprehensive eye examinations. If diabetic retinopathy is diagnosed, the eye care physician can monitor the condition and begin treatment when necessary.

Diabetic retinopathy usually appears in stages. **Background retinopathy** is an early warning stage where blood vessels in the retina become damaged and leak blood or fluid. An eye examination is the only way to detect changes. **Macular edema** is very common in background



retinopathy and is, in fact, the most common cause of vision loss in diabetes. In macular edema, leaking fluid collects in the macula, the central part of the retina, and vision may gradually blur.

When new, abnormal blood vessels begin to grow on the retina, this is called **proliferative retinopathy**. When these blood vessels break and bleed into the **vitreous**, which is the clear, gel-like substance that fills the center of the eye, blood clouds the vitreous and partially blocks light that is passing through the pupil towards the retina. The condition, called *vitreous hemorrhage*, causes blurred and distorted images. Sometimes the new blood vessels form scar tissue that causes the retina to pull away from the back of the eye. This is called *retinal detachment* and can cause severe vision loss if left untreated. Proliferative retinopathy is the most serious type of diabetic retinal disease. According to the American Academy of Ophthalmology, it affects up to 20 percent of people with diabetes and can cause severe loss of sight, including blindness.

Laser treatment and other types of surgery are effective treatments for diabetic retinopathy, slowing down vision loss in early stages and reducing the chance of severe vision impairment later on. In **laser surgery**, a powerful beam of laser light is focused on the retina, and small bursts of light can help seal leaking blood vessels or help bond the retina to the back of the eye, thus preventing retinal detachment.

When proliferative diabetic retinopathy is advanced, a **vitrectomy** may be recommended, removing the vitreous and replacing it with a clear solution. According to the American Academy of Ophthalmology, about 70 percent of people who have had this procedure notice an improvement in sight. **Retinal repair** surgically reattaches the retina when retinal detachment has occurred.



Successful care of diabetic retinopathy depends not only on early diagnosis and treatment, but also on careful attention to medications and diet. Maintaining blood sugar levels, avoiding smoking, watching blood pressure and serum cholesterol levels are all very important. If serious vision loss has occurred, vision rehabilitation may be helpful. This process involves an assessment of remaining vision and training in new visual skills with special adaptive vision devices. For more information talk to your eye care physician, CSBPS staff, the Lighthouse National Center for Vision and Aging **(800) 334-5497**, Prevent Blindness America **(800) 342-2020**, or your local chapter of the American Diabetes Association **(800) 342-2383**.

Ways to prevent vision loss

- Pay attention to any visual symptoms, but remember that diabetic retinopathy may be present without symptoms.
 - Early detection is the best protection against vision loss.
 - Schedule a comprehensive eye examination at least once a year.
 - Treatment can begin before sight is affected. Laser surgery and other surgical procedures are very effective.
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C•S•B•P•S

Programs and Services

- Low vision clinic and low vision rehabilitation
- Instruction in independent living skills
- Professional counseling and support groups
- Safe travel and orientation training
- Education, information and referral services
- Assistive Technology resources
- Adaptive aids specialty store, SightConnection

Since 1965, our mission has been to work with individuals, families and communities to restore, maintain and enhance the independence and well-being of people with impaired vision.

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