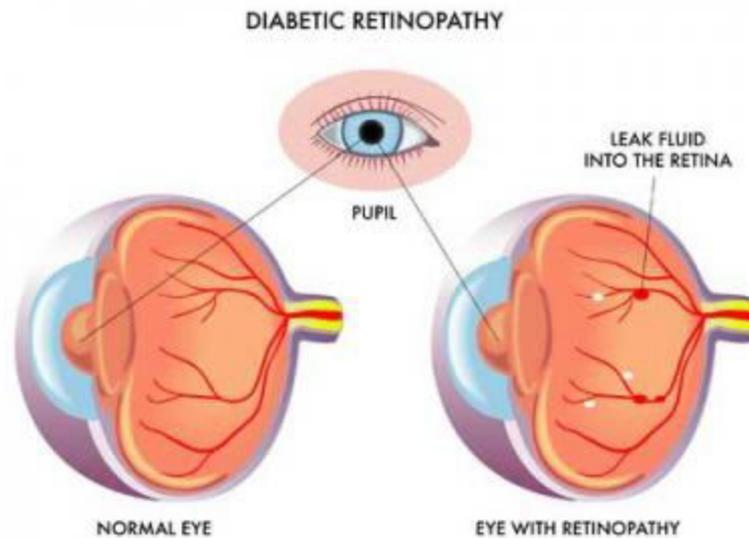


Diabetic Retinopathy



By - [Duane M. Bryant, M.D.](#)



Diabetes is a disease that occurs when an organ called the pancreas does not secrete enough insulin. Insulin is the hormone that regulated the blood sugar (Glucose) level. Diabetes most commonly occurs in adults, although it can affect children as well.

Both cataracts and glaucoma are associated with diabetes. The main area to be affected in the eye is the retina. This is called diabetic retinopathy. It most commonly occurs in individuals who have had diabetes for more than 20 years.

Over time, diabetes affects the circulatory system of the retina. There are two major stages of DR. The earliest stage is called background diabetic retinopathy. In this stage the small blood vessels of the retina become weak and they have a tendency to bleed and to leak fluid as well as fat (lipid) out of the bloodstream and into the retina. This can cause blurred vision.

The next stage is known as proliferative diabetic retinopathy. In this stage abnormal, fragile blood vessels grow erratically from the retina. This is called neovascularization. These very fragile vessels hemorrhage easily. Blood can leak into the retina and the vitreous. If it leaks into the vitreous it can cause spots or floaters as well as blurred vision.

In the later stages of the disease, continued growth of these abnormal vessels and cause tugging on the retina and scarring. This may lead to serious problems like retinal detachment and glaucoma.

Some of the sign and symptoms of diabetic retinopathy are

- Blurred vision
- Floaters and spots
- Sudden loss of vision

Diabetic patients require routine examination of the eye to detect any diabetic eye changes. The earlier diabetic retinopathy is caught, the better the prognosis. Diabetic retinopathy is monitored by testing such as fluorescein angiography, retinal photography and ocular tomography.

The methods of treatment for diabetic eye disease include laser surgery and vitrectomy (blood is removed along with the vitreous gel of the eye). If retinal detachment occurs, that is repaired surgically.

There are 4 mainstays of prevention for diabetic eye disease:

- Good control of the blood glucose (sugar) levels
- Good control of blood pressure
- Good control of cholesterol levels
- Management of any kidney disease.

Treatments and Additional Information

Pan-retinal Photocoagulation-

A laser treatment for proliferative diabetic retinopathy. The laser is applied to the peripheral retina. This shrinks the blood vessels, often prevents them from regrowing, and decreases the chances of the blood vessels bleeding into the vitreous or causing a retinal detachment.

Focal Photocoagulation-

Focal treatment is used to seal specific leaking blood vessels in a small area of the retina, usually near the macula. The ophthalmologist identifies individual blood vessels for treatment and makes a limited number of laser applications to seal them off.

Avastin Intravitreal Injections-

Avastin is an Anti-Vegf agent that is used to treat diabetic macular edema, neovascular glaucoma and proliferative diabetic retinopathy.

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