

DIABETIC RETINOPATHY

Diabetes mellitus is a condition which impairs the body's ability to use and store sugar. The past two decades have seen an explosive increase in the incidence of diabetes in India, which has the largest number of diabetics in the world today.

This increased incidence of diabetes and its complications has been attributed to change in life style caused by increased urbanization, high calorie diet, decreased physical activity and stress. Another cause for concern is that diabetes is striking at an early age among the urban population.

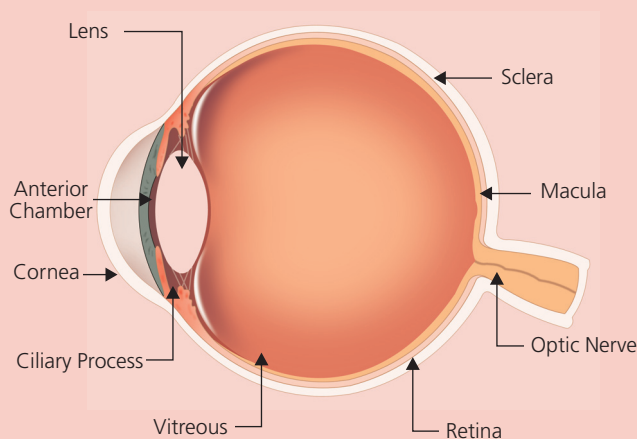
Diabetics are also 25 times more likely to develop blindness, twice as likely to have a stroke, 2-4 times more likely to have myocardial infarction and much more likely to develop kidney disease or undergo amputation.

Diabetics are also at high risk for eye complications, the most common one being diabetic retinopathy.

Q. What is diabetic retinopathy?

A. It is an advanced stage of the disease process in which the blood vessels in the retina are damaged and leak fluid or blood. It has been seen that 25 per cent of all diabetics develop this complication after 10 years of diabetes and 50 per cent develop it after 20 years of diabetes. People with type I diabetes [diabetes since childhood] are more likely to develop diabetic retinopathy at a younger age. Diabetics also have a higher incidence of cataract and glaucoma and those with poorly controlled blood sugar and blood pressure are at a higher risk of losing vision.

Anatomy of an Eye



Q. What are the symptoms of diabetic retinopathy?



Normal Vision



Diabetic Retinopathy

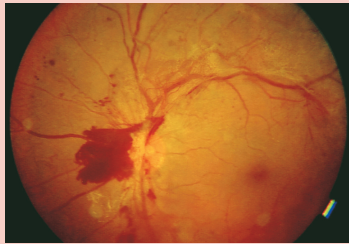
A. Early diabetic retinopathy usually has no symptoms. Gradual blurring of vision may occur if fluid leaks in the central part of the retina [the macula]. In late diabetic retinopathy [proliferative stage], new abnormal blood vessels begin growing on the surface of the retina or the optic nerve. These vessels have weak walls and leak blood out into the retina and vitreous [jelly that fills most of the eye]. Presence of blood in the path of light entering the eye blocks vision.

Q. How is diabetic retinopathy diagnosed?

A. A complete eye examination is required for the detection of diabetic retinopathy. The retina of the eye is examined using an instrument called the indirect ophthalmoscope after dilating the pupils. If diabetic retinopathy is found, a special test called

Optical Coherence Tomography (OCT) and fluorescein angiography (FFA) may be performed where a dye is injected in the vein and photographs of the retina are taken.

Q. How is diabetic retinopathy treated?



Bleeding from damaged blood vessels

A. In early cases only regular follow-up may be necessary. More advanced cases require treatment to control the damage of diabetic retinopathy and improve sight.

1. **Laser photocoagulation** involves the focusing of a powerful beam of laser light on the damaged retina to seal leaking retinal blood vessels and stop abnormal blood vessel [neovascularization] growth.
2. **Intravitreal Injections** for Diabetic Macular Oedema (DME) include:
 - Bevacizumab (Avastin)
 - Ranibizumab (Accentrix / Ranieyes)
 - Aflibercept (Eylea)
 - Faricimab - SVOA (Vabysmo)
 - Dexamethasone (Ozurdex)
3. **Vitrectomy:** In the event of the patient presenting with very advanced diabetic retinopathy, a microsurgical procedure known as vitrectomy is recommended. Blood-filled vitreous gel of the eye is replaced with a clear solution to aid in restoring vision. Sometimes the retina may also be detached. Vitrectomy surgery is then performed to reattach the retina.

Intravitreal injection – Anti-VEGF drugs injected into the eye help to seal leaking blood vessels and reduce swelling of retina.

Q. How to prevent visual loss in diabetes

- A.** Early detection of diabetic retinopathy and timely laser treatment is the best protection against loss of vision. Diabetics must have their eyes examined regularly. The preventive measures are designed towards providing regular preventive care as well as

follow-up for patients with established diabetic retinopathy. Additionally, all diabetics must maintain control of blood sugar and blood pressure and follow a regular exercise regime and healthy diet.

The Diabetic Retinopathy Treatment Plan

The objective of treatment is for the special purpose of preserving sight in sight-threatening conditions such as diabetic retinopathy

1. Diabetes needs regular follow-up since the condition can lead to a dramatic loss of vision if poorly treated or neglected
2. Various factors govern the rate of progression of your condition. It is therefore necessary to review your eye condition periodically even after the present condition has been treated.
3. The patients receive specialized care provided by our diabetic retina specialists
4. At each visit, we check your vision, intraocular pressure, do a slit-lamp biomicroscopy and perform a detailed retinal examination with dilated pupils using an Indirect Ophthalmoscope. We record images on the advanced Visupac system and maintain records of your eye condition for comparison on following visits.
5. Perform special procedures like Fluorescein Angiography, Laser Photocoagulation and Optical Coherence Tomography (OCT) if required.


All diabetics must have the eyes examined regularly with dilated pupils. Juvenile diabetics must have their eyes examined atleast once a year after the age of 12 years because diabetic retinopathy is rarely known to occur before puberty. Those with diabetes at an older age must have the eye examination done once at the time of diagnosis and then at least every 6 months to one year thereafter. If Diabetic Retinopathy has been diagnosed, they should have the eyes examined as often as recommended by their eye doctor.

This leaflet is intended to provide general information for patients.

"Diabetes not minded will get you blinded!"
Shroff Eye Opener® # 16
Diabetes is the leading cause of blindness


Shroff Eye Clinic

Gobind Mahal, 86-B Netaji Subhash Road, Mumbai 400 002, India
Tel: (+91-22) 4516 3771 / 72 / 73 / 74 / 35935511 /
+91 8850104077

 +91 7718954077

Shroff Eye Hospital • Vision Research Centre

222 S. V. Road, Bandra (West), Mumbai 400 050, India
Tel: (+91-22) 68451001 / 02 / 03 / 04 / 05 /
66921000 / 66939372 / 66949876 / 66949880

 +91 8879189696