

Diabetic Retinopathy : Reducing the Risks

Dr. Ajay Dudani

Diabetes is one of the fastest growing diseases in India. In 1995 nearly 135 million people had diabetes throughout the world; however, the World Health Organization (WHO) has estimated that in India, the number of adults with diabetes would be the highest for any part of the World: a startling 195 per cent increase, from 19 million in 1995 to 54 million in 2025.

What Is Diabetes Eye Disease ?

Diabetes eye disease refers to a group of eye problems that people with diabetes may develop as a complication. All can cause severe vision loss or even blindness. Diabetes eye disease, includes: Cataract, Glaucoma and Diabetes Retinopathy damage to the blood vessels in the retina, in addition, diabetes can affect the optic nerve and cause anterior ischemic optic neuropathy (AION) and palsies of the nerves that supply to the external muscles of the eye.

Who is at risk for diabetic retinopathy ? What is diabetic retinopathy ? How does it damage the retina?

All people with diabetes are at risk; during pregnancy, diabetic retinopathy may worsen. The longer a person has diabetic, the greater the risk of developing Diabetic

These two treatments are laser surgery and vitreous surgery. It is important to remember that though both of these treatments are very successful, they do not cure diabetic retinopathy.

Laser Surgery

Laser treatment, once again, is done in the office as an outpatient procedure. Before treatment, pupils are dilated and drops are applied to numb the eye, in some cases the doctor may also numb the area behind the eye to prevent any discomfort.

During the treatment, you may see flashes of light. After the treatment, you might need someone to drive you back; for the rest of the day, your vision will be a little blurry.

Laser treatment is done to treat both diabetic macular edema and proliferative diabetic retinopathy. Timely laser surgery can reduce vision loss from macular edema by half. But you might require laser surgery more than once to control the leaking fluid. Laser light helps in sealing leaking vessels to stabilize the vision and prevent further visual loss.

Similarly, Laser surgery is used to destroy new and abnormal blood vessels that form at the back of the eye. In



Non Proliferative Diabetic Retinopathy



Proliferative Diabetic Retinopathy



Lasers Treated Maculopathy?

Retinopathy. Nearly half of all people with diabetes will develop some degree of Diabetic Retinopathy during their life-time.

The retina gets its food supply from various blood vessels that are present in the retina. Normally, the retinal blood vessels do not leak. But in patients with diabetes, the retinal blood vessels can develop tiny leaks, which cause fluid or blood to seep into the retina; the retina becomes wet and swollen and cannot work properly. This is known as diabetic retinopathy

The central part of the retina is known as macula, and is the most important and sensitive area for us to see and read. In patients with diabetic retinopathy, if the damaged blood vessels leak fluid and lipids onto the macula, it results in a condition known as diabetic maculopathy, an important reason for blurring of vision in diabetics.

How is it treated

There are two treatments for diabetic retinopathy. They are very effective in reducing vision loss from this disease. In fact, even people with advanced retinopathy have a 90 per cent chance of keeping their vision provided they get treatment before the retina is severely damaged.

Such cases, rather than focus the laser light on a single spot, hundreds of small laser spots are placed on the retina. This is called Scatter Laser treatment. The treatment shrinks the abnormal blood vessels. You might lose some of your side vision after this treatment to save the rest of your sight. Laser surgery may also slightly reduce your colour and night vision.

Tips: Remember laser treatment for macular edema does not improve the vision; it only stabilizes it.

Vitreous Surgery

Instead of laser surgery, some patients may require an eye operation called a Vitrectomy to restore mobile vision. This procedure is performed to remove blood from inside the eye.

Early surgery is recommended in type I diabetics as these patients have a greater risk of blindness from complications of proliferative diabetic retinopathy. Vitrectomy is done under local anaesthesia: this means you will be awake during the operation. Your surgeon will make a tiny hole in the sclera, or white of the eye. Next, small sized instruments (about 1 mm in diameter) are placed into the eye in order to achieve surgical goals. Tips: Remember if proliferative diabetic retinopathy remains untreated, about half of those who have it become blind within five years, compared to just five per cent of those who receive treatment.