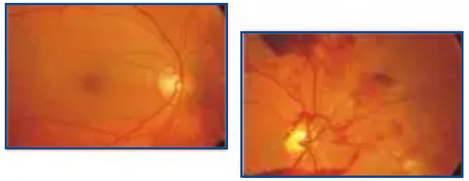
Diabetes can a ect the eyes as a long tern complicaəon of the disease. The most common and sight threatening complicaəon a ects the reəna' which is the main part of the eye. This disease is called Diabeəc reənopathy (DR)

How serious is this disease?

DR if not treated on əme can result in permanent blindness. It is a common cause of blindness in the wester world is rapidly becoming common in our country.

How does vision loss occur?

Vision loss commonly occurs due to bleeding into the eye from the growth of new blood vessels or from the swelling of reənal əssues. Other causes include reənal detachment, glaucoma, cataract, infecəons and others.



Retina of a normal patient (left) and Retina of a patient with devastation caused by Diabetic Retinopathy (Right)

Who is likely to get diabeəc reənopathy?

All diabeəcs can eventually develop DR. The chances of ge ǩ ng the disease increase with the following:

- Duraəon of diabetes The longer one has had diabetes, the higher the likelihood of developing reənopathy.
- Poor glucose control Usually most diabeəcs do not control their blood glucose levels in the early course of the disease resuləng in a gradual damage to the blood vessels the e ects of which show up later in life.
- High blood pressure If blood pressure is not well-controlled then this will increase your risk of developing reənopathy.
- Nephropathy (kidney disease) kidney and eye complicaəons oƭen go hand in hand
- Anemia decreases the oxygen carrying capacity of the blood worsening the amount of oxygen reaching the reəna.
- Smoking or Tobacco in any form.
- Other risk factors include pregnancy, obesity and having high cholesterol levels.

What I can i do to prevent blindness from DR?

DR is a di cult disease to treat and best results are achieved when diagnosed early and treated at the right əme. For this your reəna should be checked as soon as you are diagnosed with diabetes and yearly thereaƭer or as your doctor advises. Also keeping a strict control of blood sugars/BP and other factors menəoned above will help.

If I control my blood sugars now will my eyes become alright?

Controlling blood sugars now will certainly help to some extent but cannot completely reverse the damage that has already taken place. The e ect of the damage done over years keeps causing problems. It is like a smoker who has smoked for many years and has spoilt his lungs. Stopping smoking now will not make the damaged lungs beğer but will prevent further destrucəon.

When should I get my eyes examined?

All diabeəcs must undergo a thorough eye examinaəon once a year. The examinaəon must include a check of the vision, eye pressures and examinaəon of the reəna aƭer dilaəon of the pupils with eye drops.

Age of onset	Recommended time of First examination	Minimum follow up
0-30 years	After 5 years/attainment of puberty-whichever is earlier	Once a year
Above 30 years	At time of diagnosis	Once a year
Pregnancy	Prior to pregnancy / First trimester	Every trimester

Do I need to get myself examined even if I have perfect vision?

Yes, all diabeəcs must be examined even if they have perfect vision as there can be Diabeəc Reənopathy without loss of vision. Also it is easier to prevent loss of vision than to bring back lost vision.

What Invesəgaəons (special eye tests) may be required?

The following invesəgaəons may be ordered by your doctor to understand your disease beğer and to plan the treatment.

1. Fluorescein Angiography (FFA)
2. Opəcal Coherence Tomography (OCT)
3. Ultrasonography (USG) in paəents with vitreous hemorrhage.

What are the treatment opəons?

Depending on the severity of reənopathy that you have the following treatment opəons may be recommended. One or more may be advised at the same əme.

Laser photocoagulaəon is advised:

- To prevent 'new blood vessel' formaəon
- To treat or destroy formed 'new blood vessels"
- To decrease the swelling of the reəna

While undergoing treatment with lasers it is important to remember that: It is done in the OPD and is not a surgery.

Use of lasers may not result in visual improvement, but is done to prevent further drop in vision.

Muləple si ǩ ngs may be required depending upon the severity of the disease.

Injecəons of drugs into the eye help to decrease the swelling of the reəna and to dry up the new vessels. The e ect of these injecəons is only 'temporary' and gives əme for more permanent treatments (laser, vitrectomy) to be e ecəve. These injecəons are:

- Bevacizumab (Avasən)
- Ranibizumab (Lucenəs)
- Pegaptanib Sodium (Macugen)
- Triamcinolone (Tricort/Kenacort)

Vitreoreənal surgery: In advanced cases of Diabeəc Reənopathy, laser photocoagulaəon may not work and surgery may be required.

Is the treatment of diabeəc reənopathy required again and again?

Yes. Since the disease does not leave the paəent it can again and again cause problems which have to be treated from əme to əme. All paəents need regular follow up throughout their lives. Further inveəgaəons and treatment are required from əme to əme as decided by the doctor.

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Diabeəc Reənopathy