

DIABETIC RETINOPATHY

Who gets diabetic retinopathy?

The longer you have diabetes the greater the chance of developing diabetic retinopathy. 80% of patients with diabetes longer than 15 years have some signs of retinopathy. Good control of your diabetes is essential, with a healthy diet and regular exercise can help reduce the risk of developing diabetic retinopathy.

How does diabetes affect the eye?

In diabetes mellitus blood sugar levels are poorly controlled and can become too high. This can damage the small blood vessels at the back of the eye in the retina leading to bleeding and leakage of blood and fluid which may obscure vision. Early changes in the retina are known as background diabetic retinopathy and no treatment is indicated. The two main causes of reduced vision from diabetic retinopathy are:

Diabetic maculopathy – this is when the central area of the retina (macula) becomes swollen, vision is reduced. Laser treatment or injection with a medication called anti-VEGF (vascular endothelial growth factors) (eg. Lucentis, Eylea, Iluvien) into the eye is required to reduce the leakage to improve vision and prevent deterioration.

Proliferative diabetic retinopathy – tiny new blood vessels can grow on the surface of the retina and bleed into the vitreous jelly that fills the back of the eye (vitreous haemorrhage), leading to severe loss of vision.

Can diabetic retinopathy be treated?

Yes, but most cases just need regular observation in clinic. Treatment in some patients are as follows:

INTRAVITREAL INJECTIONS – patients with maculopathy (leakage in the central retina) may be best treated with a series of intravitreal anti-VEGF injections (Lucentis, Eylea or Iluvien).

LASER TREATMENT – A precise beam of laser (photocoagulation) is directed at the back of the eye to seal leaking blood vessels in diabetic maculopathy and in proliferative retinopathy where laser burns are scattered over parts of the retina to reduce the production of new vessels and reduce the risk of bleeding.

SURGERY – This is indicated in the following situations:

Vitreous haemorrhage is the major indication for surgery: the blood-filled vitreous jelly is removed (vitrectomy) and replaced with a clear fluid so that vision is improved. Further retinal laser treatment is performed at the same time.

Recurrent vitreous haemorrhage – Sometimes vitreous haemorrhage clears only to rebleed repeatedly due to tiny areas of traction on abnormal new blood vessels on the retina.



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Vitrectomy stabilises the situation by removing sites of traction and preventing further bleeds.

Tractional retinal detachment – Contraction of the abnormal blood vessels and associated tissue may produce retinal detachment. Therefore, a vitrectomy is required to stabilise the situation.

How do I know if I diabetic retinopathy?

The early changes of diabetic retinopathy may not be noticed by the patient as the vision is not affected. However, a visit to your doctor or optometrist may be able to see early signs of diabetic retinopathy by examining the retina. Drops are used to dilate (widen) your pupils to examine the back of the eye.

If you do need to have dilating drops your eyes will be very light sensitive for a few hours afterwards: it is best to get someone to drive you home. Sometimes special photographs are taken of the retina (OCT (optical coherence tomography or fluorescein angiography) to help decide if treatment is required.

Regular eye checks for diabetics are available at local optometrists who should be a part of your local community diabetic screening programme. Make sure that you have regular eye checks, at least once a year, either with your trained optometrist, or eye doctor.

