

DIABETIC EYE DISORDERS

What are diabetic eye disorders?

Diabetic eye disease is a major cause of blindness worldwide. It is important to screen for this, as the damage which can be seen at the back of the eye on the retina, is probably similar to the damage which is occurring in other parts of the body importantly in the heart, the kidneys and the feet.

1. BLURRED VISION

Fluctuating blood sugar levels can cause intermittent blurring of vision.

2. PARALYSIS OF NERVES CONTROLLING EYE MOVEMENT

Middle-aged diabetics may have this problem leading to double vision. Fortunately this usually resolves within 3 months.

3. CATARACT

Cataracts are 5 times more common in diabetics than non-diabetics.

4. GLAUCOMA

This means that the pressure in the eye is high. The risk is higher in diabetics than non-diabetics. Early diagnosis and treatment is important to prevent further loss of vision.

5. DIABETIC RETINOPATHY

Diabetic retinopathy is a serious complication of diabetes, affecting the retina at the back of the eye. Light is focused by the cornea and lens on the retina where the photoreceptors and nerves form an image.

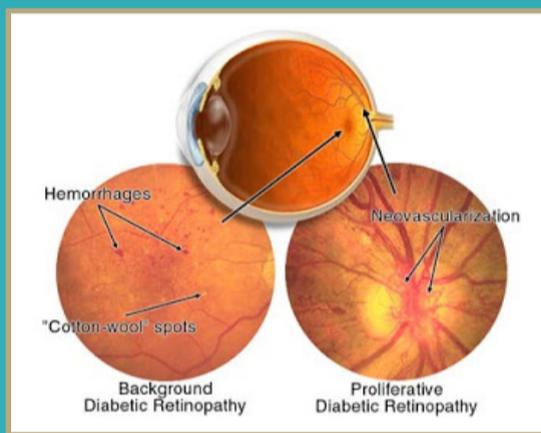
These images are then carried to the brain via the optic nerve.

If the retina is damaged, then the image sent to the brain is blurred or incomplete.

The risk of developing retinopathy is high if the patient has had diabetes for a long time - about 60% of patients who have had diabetes for 15 years or more develop this complication to some extent. A small percentage of these patients will become blind. Diabetic retinopathy has become the leading cause of blindness in South Africa.

Early detection and treatment of diabetic retinopathy can reduce blindness by more than 50%.

Forms of diabetic retinopathy



BACKGROUND RETINOPATHY

This occurs in the early stage of diabetic retinopathy. In this phase, the arteries in the retina become weakened and leak, resulting in haemorrhages and exudates (accumulation of fat and protein in the retina). Swelling (called oedema) in the retina may also result and cause decreased vision. Regular eye examinations are essential as changes in the eye like these can go unnoticed.

PROLIFERATIVE RETINOPATHY

In this stage, blockage of blood vessels causes areas of the retina to become oxygen-deprived or ischaemic. New, fragile, vessels develop as the circulatory system attempts to maintain adequate oxygen levels within the retina. This is called neovascularization. Unfortunately, these delicate vessels bleed easily. Blood may leak into the retina and vitreous, causing spots or floaters, along with decreased vision.

In the later phases of the disease, continued abnormal vessel growth and scar tissue may cause serious problems such as retinal detachment and glaucoma.

How is diabetic retinopathy diagnosed?

A fluorescein angiogram is a painless procedure during which the ophthalmologist is able to photograph the blood vessels in the back of the eye and get detailed information about the changes in the retina. It is often necessary to guide laser treatment.

Ocular Coherence Tomography (OCT) scans are used to detect swelling in the retina.

Calculate your own risk for diabetic eye disease by following the link to riskafrica.

Diabetes is the cause of many eye disorders.

It is therefore imperative that all diabetics should:

- have yearly check-ups with an ophthalmologist;
- control their diabetes as strictly as possible with diet, weight control, exercise, and medication;
- control blood pressure and blood lipids (cholesterol);
- stop smoking

How is it treated?

- Laser therapy or photocoagulation is a mainstay of treatment. Macular grid or focal laser may be used to seal areas where the blood vessels are leaking and thus reduce swelling. Pan-retinal photocoagulation (or PRP) is used to reduce new vessel growth. If diabetic retinopathy is detected early and laser treatment done timeously, the risk of severe visual loss is greatly reduced. Note that laser therapy prevents further visual loss; it does not necessarily improve vision.
- Intravitreal injections of certain medications such as anti-VEGF or steroids in the eye are useful in some patients.
- Vitrectomy: The vitreous humour is a clear gel-like substance that fills the space between the lens of the eye and the retina. This can become clouded with blood if there is bleeding from the retina. A vitrectomy is a surgical procedure during which the vitreous is removed. This is sometimes necessary to clear haemorrhage or remove scar tissue from the surface of the retina and treat retinal detachment.
- Good control of the diabetes is essential especially in the early stages of the disease. This can delay and slow down the development of retinopathy.
- Blood pressure and blood lipids (cholesterol) should also be well controlled.

Please note that these are general guidelines. If in doubt, consult your ophthalmologist.