### REDUCING THE RISK

You can reduce your risk of developing retinopathy or help to stop it from getting worse by:

- controlling your blood sugar (glucose levels)
- tightly controlling your blood pressure
- controlling your cholesterol levels
- keeping fit, maintaining a healthy weight and giving up smoking.
- The most effective thing you can do to prevent sight loss due to diabetic retinopathy is to attend your retinal screening appointments. Early detection and treatment prevents sight loss

# ANNUAL DIABETIC SCREENING

If you have diabetes your GP should arrange for you to have annual retinal screening at a recommended clinic.

At this visit you will have eye drops put into your eyes which dilate the pupil and an enhanced and magnified photo is taken using a digital retinal camera. This is looked at in detail to see if there are any changes caused by diabetes.

You should NOT drive home from this screening.

DIABETIC RETINOPATHY

As you may not be aware that there is anything wrong with your eyes until it is too late, having this regular test is essential. Research shows that if retinopathy is identified early, through retinal screening, and treated appropriately, blindness can be prevented in 90% of those at risk. You should also still go for an annual eye test with your optometrist, as the retinal screening test does not replace the regular eye examination.

Nottingham Diabetic Retinopathy Service
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## DIABETES

Diabetes can cause complications which affect different parts of your body, including your eyes. The two main types of diabetes mellitus are known as Type 1 and Type 2 diabetes.

# Type 1 diabetes

This type of diabetes commonly occurs before the age of 30 and is the result of the body producing little or no insulin. It is primarily controlled by insulin injections.

# Type 2 diabetes

This type of diabetes commonly occurs after the age of 40. The body does produce some insulin, but the amount is either not sufficient or the body is not able to make proper use of it. It is generally controlled by diet, exercise and/or tablets.

Diabetes can affect the eye in a number of ways:

- Diabetic Retinopathy is the most serious eye condition associated with diabetes and involves leakage from the network of blood vessels supplying the retina.
- Blurred Vision can come and go over the day, especially when diabetes is uncontrolled, due to unusual changes in your blood sugar levels.
- Cataracts can form as a longer term effect of diabetes when the lens goes cloudy.

# DIABETIC RETINOPATHY

Diabetes affects the tiny blood vessels of the eye, and if they become blocked or leak then the retina and possibly your vision will be affected.

Forty per cent of people with type 1 diabetes and twenty per cent with type 2 diabetes will develop some sort of diabetic retinopathy.

BACKGROUND DIABETIC RETINOPATHY.
This is the most common type of diabetic retinopathy and many people who have had diabetes for some time will have this early type.
The blood vessels in the retina are only very mildly affected, they may bulge slightly (micro aneurysm) and may leak blood (haemorrhages) or fluid (exudates). As long as the macula is not affected, vision is normal and you will not be aware that anything is wrong. Your retinal screening test will keep a close check on these early changes and ensure that any signs of progression to more serious stages of retinopathy are detected early.

# MACULOPATHY

Maculopathy means that your macula is affected by retinopathy. If this happens, your central vision will be affected and you may find it difficult to see detail. Most maculopathy can be treated with laser with the aim of preserving as much vision as possible. However, the vision that allows you to get around at home and outside (peripheral vision) is not affected.

### PROLIFERATIVE DIABETIC RETINOPATHY

If diabetic retinopathy progresses, it can cause the larger blood vessels in the retina to become blocked. These blockages can result in areas of the retina becoming starved of oxygen, called ischemia.

If this happens the eye is stimulated into growing unwanted, weak new vessels, a process called neo-vascularisation. This is the proliferative stage of diabetic retinopathy. Unfortunately, these new blood vessels can bleed very easily which may result in large hemorrhages over the surface of the retina or into the vitreous gel, which can totally obscure the vision in the affected eye, until the blood can be reabsorbed and vision can improve. Extensive haemorrhages can lead to scar tissue forming which pulls and distorts the retina. This type of advanced diabetic eye disease can result in the retina becoming detached with the risk of serious sight loss.

Only between 5 and 10 per cent of all diabetics develop proliferative retinopathy. It is more common in people with type 1 diabetes than type 2. Sixty per cent of type 1 diabetics show some signs of proliferative disease after having diabetes for 30 years.