



The Importance of regular eye tests and how Diabetes can affect your vision

QUESTION AND ANSWERS

Q. WHY DOES DIABETES CAUSE EYE PROBLEMS?

A. People with diabetes can have eye problems due to leaky or blocked blood vessels in the retina, the layer at the back of the eye; over time, this can cause sight loss.

WHAT INCREASES THE RISK OF DIABETIC EYE PROBLEMS?

A. The longer someone has diabetes, the more likely they are to develop diabetic eye disease (diabetic retinopathy). Poorly controlled diabetes increases the risk.

HOW DO I TELL IF I HAVE DIABETIC EYE DISEASE?

A. If you have diabetes, you may not notice the signs or symptoms of early diabetic eye problems. Check your eyes regularly to pick up any changes.

In almost all UK areas, a screening programme will invite you to get an annual eye check using digital photography for diabetic eye disease if you have diabetes. It is essential to have this done. Laser treatment of the problem blood vessels can prevent further sight loss for nine people in ten. However, improvement in sight, which has already been lost, is only possible for a minority.

DOES DIABETES CAUSE OTHER EYE PROBLEMS TOO?

A. People with diabetes are twice as likely to develop glaucoma as other adults and also tend to develop cataracts at an earlier age.

HOW MANY PEOPLE HAVE DIABETES?

A. Healthcare professionals have diagnosed around 3.2 million people with diabetes in the UK, and they estimate that an additional 500,000 individuals with the condition go undetected. Diabetic retinopathy remains the leading cause of blindness amongst working-age adults in the UK and most of the developed world.

WHY DOES DIABETES CAUSE EYE PROBLEMS?

A. Raised sugar levels cause changes to blood vessel walls, which can be a particular problem in the eye as the blood vessels are small and thin. Diabetic eye disease is the most common complication of diabetes.

WHO IS MOST AT RISK OF DIABETIC EYE DISEASE?

A. several factors will raise your risk of diabetic eye disease. You have a higher risk of diabetic eye disease if you are diabetic and:

- You have had diabetes for a long time. It is uncommon in people who have had diabetes for less than five years, but almost everyone who has had diabetes for over 30 years has signs of eye disease.
- Your diabetes is not well controlled, but some people who control their condition well will still develop diabetic eye disease
- You have high blood pressure that is not well-controlled
- You have diabetic kidney disease (known as nephropathy)
- You are pregnant
- You smoke
- You are obese
- You have high cholesterol

WHAT CHANGES TAKE PLACE INSIDE THE EYES WITH DIABETIC EYE DISEASE?

A. Diabetic eye disease starts with minor changes to the blood vessels at the back of the eye. You can't see these changes yourself, but an eye specialist can detect them when using a bright light to look inside your eye. Specialists can regularly take digital photos of the back of your eye as part of a national screening program to detect any early changes.

Initially, tiny swellings appear in the walls of the blood vessels that carry nutrients to the retina, the layer of cells at the back of the eye. These swellings are known as 'microaneurysms', where tiny, weak blood vessels can leak plasma or blood. At this early stage, known as 'background diabetic retinopathy', there is no threat to your sight. However, it is still important to attend your appointments, as advised by your specialist, to monitor the condition.

After these initial swellings, some retinal blood vessels can become blocked, depriving parts of the retina of blood flow. The retina then sends signals to the body to grow new blood vessels, which are fragile. They grow and attach themselves to the

surface of the gel inside the eye, causing scar tissue to form, which leads to severe vision loss. This scarring is known as 'proliferative diabetic retinopathy'.

WHAT MACULAR PROBLEMS ARE ASSOCIATED WITH DIABETIC EYE DISEASE?

A. People with diabetes can have problems with the macula, the central part of the retina that allows you to see small details. Diabetic retinopathy that involves the macula can cause issues with your central vision. The leaky blood vessels in the retina can also cause extra fluid to leak into the macula, which makes it swell and causes blurred vision.

It can happen at any time but is more likely to occur if you have had diabetes for a long time. If you have diabetes and your vision becomes blurred, you should contact your diabetic specialist immediately.

HOW ARE DIABETIC EYE PROBLEMS DETECTED?

A. If you know you have diabetes and are aged 12 or over, you should be invited to a special eye test at least every year. The frequency of appointment offers will depend on your particular circumstances. Some people attend for a diabetic eye check at a high street optical practice. In contrast, others may go to a hospital clinic or community screening centre.

WHAT HAPPENS DURING DIABETIC EYE SCREENING?

A. When you go for a screening appointment, your eye specialist will:

- Check your level of vision. This eye test is not a comprehensive eye test as you would get with an optician
- Give you some eye drops which will dilate your pupil, allowing the eye specialist to get a detailed view of the back of the eye; your eye care professional will then shine a bright light into the eye to check the tiny blood vessels on the retina – this may be dazzling but isn't painful
- Take a photograph of the back of the eye – this gives your specialist the ability to more easily compare changes at the back of the eye year on year

After the tests, your eyesight will remain blurred until the drops wear off, requiring you to arrange an alternative way home, as you won't be able to drive.

WHAT HAPPENS IF SCREENING FINDS A PROBLEM WITH MY EYES?

A. The eye specialist might recommend a fluorescein angiogram test, which involves using dye to reveal leaky blood vessels at the back of the eye. During this procedure, the specialist will administer eye drops so that they have a clear view of the back of your eyes while injecting a special dye into your arm. As the dye circulates through the blood vessels at the back of the eye, specialists take photos to observe precisely where the blood leaks.

WHAT IS THE TREATMENT FOR DIABETIC EYE PROBLEMS?

A. If mild or early diabetic eye disease is detected, you are unlikely to be offered treatment. Instead, your eyes will be monitored every few months.

If you have new blood vessels growing at the back of the eye, laser treatment can remove them. Laser treatment can usually prevent diabetic eye disease from worsening or at least slow down the rate of further visual loss. However, it can only occasionally restore lost sight. If you do get offered laser treatment, you may need more than one treatment session.

You will attend your laser treatment appointment at an outpatient clinic and do not need to stay overnight in the hospital.

When you have the laser treatment, the specialist will give you some eye drops to widen your pupil so they can see the back of the eye in detail. Anaesthetic drops will numb the eye surface, and a contact lens is placed on the eye.

The specialist will then focus the laser on problematic areas at the back of the eye and use the pinpoint laser to seal leaks and prevent new blood vessel growth.

The treatment may be uncomfortable, but only some types of treatment cause pain: the specialist will tell you if you are likely to need pain relief.

Because the laser is very bright, your vision will be blurred immediately after the operation, and you may also have a headache. Some people also notice some black spots on their vision after treatment.

If you have had laser treatment, your peripheral vision can be affected. You must let the Driver and Vehicle Licensing Agency (DVLA) know when you have had the treatment.

WHAT CAN I DO TO LOOK AFTER MY EYES?

- If you have diabetes, there are several things you can do to minimise sight problems:
 - Attend a regular eye check annually, or more often if advised by your specialist
 - Take care to control your blood sugar as well as possible; this can delay the start of eye problems, slow their progression, and reduce the need for laser surgery – talk to your GP about controlling your diabetes
 - For adults, looking after your blood pressure and cholesterol can also reduce the risk of sight loss – again, get medical advice to help with this
 - Do not smoke as this can add to problems – if you smoke, speak to your GP or pharmacist about getting help to stop
 - Exercise regularly and aim to lose any extra weight; if you have problems losing weight, ask your GP for a referral to a dietitian; if you need help getting fit, ask about exercise programmes in your local health centre
- If you notice increased spots floating in your vision or your vision becomes blurred, contact your Opticians as soon as possible.