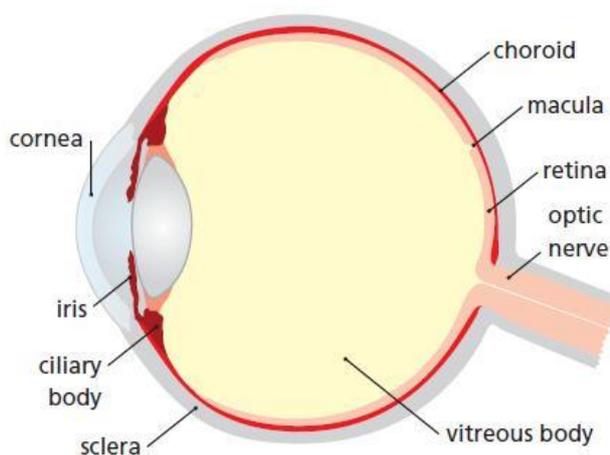


Eye Unit

Diabetic Maculopathy and Treatment Options: A Guide for Patients

This information is for patients who may undergo treatment to an area of macular oedema (leaking blood vessels causing fluid to gather in the macula) as a result of diabetes.



Cross section of the eye

What is the retina?

The retina is the layer which lines the back of your eyes. Light enters your eye and passes through the lens which focuses the light on to the retina. Messages about what you see are then passed from the retina to the optic nerve, and on to the brain. There are many tiny blood vessels next to the retina which take oxygen and nutrients to the cells of the retina.



Patient Information

What is the macula?

The macula is the central part of the retina at the back of the eye. It is responsible for fine vision (reading, writing, and other close detailed work, watching television, and recognising faces).

What is diabetic maculopathy?

Diabetic maculopathy is a type of diabetic eye disease affecting the macula. Blood vessels that enlarge to compensate for blocked blood vessels become leaky. Maculopathy occurs when the leaked fluid builds up at the macula, leaking into the retina causing swelling.

Occasionally, the blood vessels in the macula become so constricted that the macula is starved of oxygen and nutrition causing your sight to get worse. This is called ischaemic maculopathy and it does not usually respond to any type of treatment.

People with maculopathy usually have some loss of vision and everything may appear blurred, as if looking through a layer of fluid not quite as clear as water.

Maculopathy is more common in people with Type 2 diabetes and can cause blindness.

How is diabetic maculopathy diagnosed?

Diagnosis of the macular oedema is made by clinical examination by your ophthalmologist (eye specialist). Sometimes additional information is required to assess the best treatment options and a fluorescein angiogram test may be requested.

How is diabetic maculopathy treated?

The aim of treatment is to stop the blood vessels leaking.

Laser treatment and injections of drugs known as anti-vascular endothelial growth factor (Anti-VEGF) are injected into the eye and are now the standard treatment for diabetic maculopathy.

Other treatment include a steroid injections of Ozurdex or Iluvien

Laser treatment

The aim of laser treatment is to **stabilise** the changes in your eyes caused by diabetes. The treatment does not generally improve your sight although in some cases it might. However, it is likely without this treatment that you will lose all or some of your sight.

What does laser treatment for diabetic maculopathy involve?

The laser treatment involves focussing an intense beam of light onto your retina in small spots. Gentle laser burns will be applied to the central part of the retina – the part you use for seeing clearly. You will need much less laser treatment than for other diabetic retinopathy.

What are the risks of laser treatment for maculopathy?

Complications are very rare for maculopathy treatment:

- Some people can 'see' the laser pattern after treatment – this usually continues for up to two months and very occasionally for up to six months after treatment.
- Around 1 in 10 people have reported a small but permanent blind spot close to the centre of their sight.
- The chance of you losing most of your central vision months or years after laser treatment is less than 1 in 300 (0.3%).
- We cannot completely eliminate the very small risk of accidental laser burns to the very centre of your vision. This can happen if you find it difficult to stay still or accidentally look directly at the laser as it fires.
- Occasionally, months or years after treatment, a laser burn to your retina may cause new blood vessels to grow under the macula that can bleed and scar up resulting in permanent loss of your central vision.

What is an Intravitreal Injection?

Lucentis and Eylea belong to a group of drugs called Anti VEGF and they are currently the drugs licensed for use in treating diabetic maculopathy. The drug is injected directly into the eye to treat the fluid accumulation in the main area of your vision (macula). It works by counteracting the chemicals that cause leakage and bleeding from the leaky blood vessels under the macula before structural damage develops.

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The drugs may be given alone or combined with other treatments like laser. However if you have a lack of blood supply to the macula with the additional accumulation of fluid (as described earlier called ischaemic maculopathy) then in these cases may help reduce the fluid, but the vision may not improve.

What are the benefits of receiving this treatment?

The aim of this treatment is to prevent further loss of vision.

Although some patients have regained vision, the medication may not restore vision that has already been lost and may not ultimately prevent further loss of vision caused by the disease.

Unfortunately fluid in the macula tends to come back and needs to be retreated in order not to lose control of the disease. The treatment tends to start with 5 injections given at 4 weekly intervals then you will be assessed for the response to treatment. If you are responding to treatment then we can extend your intervals to 2 monthly or 6 weeks depending on the drug and response. If you are not responding then we have options of steroid injections which are explained in a separate leaflet.

What are the risks of the injections?

- Your condition may not get better or may become worse.
- Any or all of the following complications may cause decreased vision and/or have a possibility of causing blindness.
- Additional procedures maybe needed to treat these complications.

During the follow up visits, you will be checked for possible side effects and the results will be discussed with you.

Complications of the procedure are uncommon. They include but are not limited to:

- Damage to the front part of the eye (cornea) from the disinfectant causing a temporary but painful corneal “scratch”
- Severe eye infection inside the eye (endophthalmitis)
- Retinal detachment
- Bleeding inside the eye

Patient Information

- Inflammation inside the eye
- An allergic reaction to the drug
- Cataract formation (clouding of the lens of the eye)
- Increased pressure in the eye (glaucoma)
- Reduced pressure in the eye (hypotony)

Risks to your general health you need to be aware of include:

Possible greater risk of blood clots causing events such as heart attacks or strokes. This risk has been shown to be small (non-significant) but may be greater if you have already suffered a stroke

Your instructions on the day of the injection:

Please arrange for someone to drive you to and from your appointment because you will have your pupils dilated for the procedure and will not be able to drive for a few hours.

Please bring your spectacles with you as your vision needs to be tested.

What will happen when you attend for the injection?

- Your pupil will be dilated.
- Your eye will be cleaned with an anti-bacterial solution to prevent infection
- Numbing drops will be put into your eye
- The medication is injected into the vitreous (a jelly-like substance in the back chamber of the eye).
- You will be given drops to take home to use and you will be instructed how to use them
- Please do not rub your eye and avoid swimming until your eyes feel comfortable

What to expect after the procedure:

- You may see a few spots or floaters due to the drug swirling around.
These should go away after a few days
- Your vision may be blurred for a few days

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- Your eye may be fairly uncomfortable in the first 24 hours. This is usually due to irritation caused by the strong disinfectant used during the procedure and will get better.

Should you experience any of the following side effects you must attend the Eye Casualty Department:

- If the pain worsens in the first 24 hours; this may be due to irritation from the disinfectant that occasionally causes a scratch to the front of the eye. This may be very painful but needs to be assessed at the Eye Casualty Department in Clinic 9 UHCW or out of hours at the main Accident and Emergency Department at University Hospital Coventry.
- A worsening of the redness or swelling of the eye and increasing pain after the first day
- If the spots or floaters get worse
- A yellowy discharge from the eye

Diabetes is a preventable disease:

- Poor control of your diabetes can lead to **cataract** development
- Your fasting blood glucose should in general be between **4 - 7 mmols**
- Have your HbA1C checked annually
- Have your blood pressure checked regularly depending on how well controlled it is.
- Have your cholesterol levels checked annually

Stop smoking!

Stop Smoking services at University Hospital Coventry & Warwickshire

Telephone: 024 7696 4760

Email: stopsmoking.services@uhcw.nhs.uk

Patient Information

Contact:

In case of emergencies

UHCW Eye Casualty ring for an appointment 024 76964800

Open from:

Monday to Friday (9am to 7pm)

Saturday & bank holiday (9am till 12 noon)

Out of hours ring NHS111

Useful contact numbers are:

Eye Casualty 024 7696 4800

Retinal Specialist Nurse, Sister Mann (Jas) 024 7696 4000 (switchboard)
and ask them to bleep 2828 and stay on the phone until you are connected

Ask a member of staff for:

- Diabetic retinopathy the facts
- Your guide to diabetic eye screening

Eye Clinic liaison Officer:

Hospital e-mail: sue.grewcock@uhcw.nhs.uk

RNIB e-mail: sue.grewcock@rnib.org.uk

NHS.net: sue.grewcock1@nhs.net

Telephone mobile: 07834147178

You can also access the RNIB helpline number: 0303 123 9999

Internet sites:

www.diabetes.org.uk

www.nscretinopathy.org.uk

www.rnib.org.uk

Patient Information

Appointments:

Chelsea Bolderson 01788 663992

Vicky Lacey 01788 663338

Jackie Underhill 024 76966497

The Trust has access to interpreting and translation services. If you need this information in another language or format please contact us on 024 7696 6427 and we will do our best to meet your needs.

The Trust operates a smoke free policy

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