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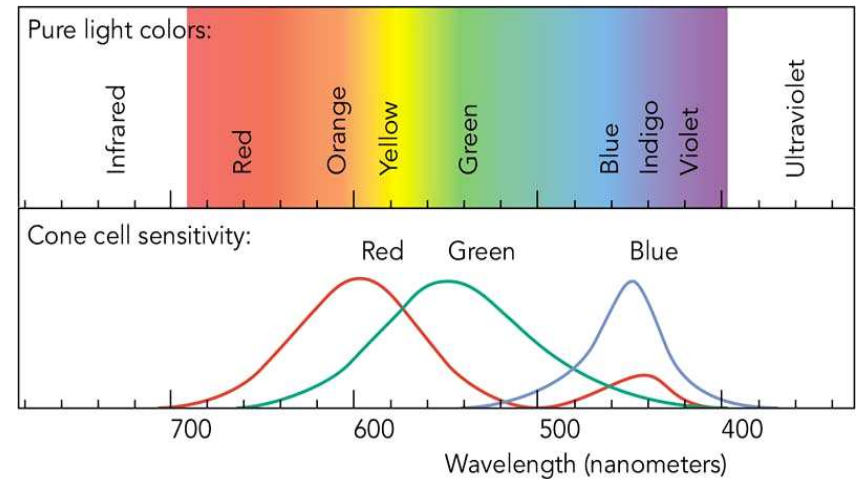
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Laser Treatment For Diabetic Macular Oedema (DME)

Ophthalmology Department



Further Information

We endeavour to provide an excellent service at all times, but should you have any concerns please, in the first instance, raise these with the Matron, Senior Nurse or Manager on duty. If they cannot resolve your concern, please contact our Patient Experience Team on 01932 723553 or email patient.advice@asph.nhs.uk. If you remain concerned, the team can also advise upon how to make a formal complaint.

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If you wish to obtain further information regarding Diabetic Eye disease and laser treatment for DME, we recommend the following Internet Links:

http://www.diabeticretinopathy.org.uk/laserdiabetic_retinopathy.html

<http://www.rnib.org.uk/eye-health-eye-conditions/diabetes-information>

Laser Treatment for Diabetic Macular Oedema (DME)

Your specialist has informed you that you have Diabetic Macular Oedema (also called Diabetic Maculopathy). Please read this information sheet and, if you have any questions, discuss this with your specialist before you have the treatment.

What is Diabetic Macular Oedema (DME)?

Diabetes can damage small blood vessels (capillaries) in your retina. Damaged blood vessels leak fluid causing swelling of the retina. If the middle part of the retina (Macula) becomes swollen, your sight may be severely damaged.

How can DME be treated?

If the condition is mild, it is sometimes possible to treat DME by improving diabetic care (blood sugar levels), blood pressure and blood fat (Lipid) levels.

In many eyes, however, DME has to be treated with Laser. In some cases, where laser has not been effective, newer treatments including injection of steroids or other

drugs may become necessary. There are many different types of laser used for a variety of eye conditions.

The treatment for DME is different to that used for correcting shortsightedness.

Laser is an outpatient procedure. Laser for DME is a well-established and effective treatment. Usually, a green colour laser (Argon or Diode 532) is used. The laser causes changes in the cells under the retina (Retinal Pigment Epithelial or RPE cells). After laser, RPE cells become more effective in removing the accumulated fluid.

How effective is this treatment?

It is important to remember that no treatment is effective in 100% of cases.

The main aim of treatment is to prevent further loss of vision. In some cases, sight might improve after laser. More than one treatment, however, might be needed.

Laser alone is about 60-70% effective in preventing blindness due to DME.

Can I do anything to improve DME or prevent it recurring?

Yes. Like all complications of diabetes, good control of your blood sugar levels, blood pressure and blood lipids can improve DME and reduce the risk of recurrence.

With blood sugar, you must try to get the long-term sugar test (HbA1c) result to be under 7% and not to have too much fluctuation of the daily sugar levels.

Where possible, your blood pressure should be at or under 120/80 and if your lipids are elevated, you should be on treatment for this.

Please be guided by your GP, Diabetologist or Diabetic Specialist Nurse. Do not try to change your treatments yourself. Sudden changes in sugar levels can sometimes worsen eye disease.

What about aftercare?

There is no special aftercare. Your sight will be affected for a couple of hours due to the eye drops and the bright laser light. This will improve by itself.

You do not need to rest afterwards and can carry on with your normal diet and activities.

How will I know if the treatment has been effective?

You might not notice any change. Any improvement is gradual and takes several weeks, and in many cases laser only stops further deterioration. Your specialist will re-examine your eyes, usually about 2 months after treatment. In addition to looking at the retina using a microscope, retinal scans (OCT) done before and after laser will help the doctor decide if treatment has been successful.

Further laser treatments might be needed if the condition has not responded, or responded poorly, or because the condition has recurred.

Even with eyes that eventually become blind, laser can often slow down the process, delaying severe damage. Furthermore, where laser fails, in some cases, newer treatments with injections can be effective.

What are the complications of laser treatment for DME?

Common but non-serious problems:

1. Laser is extremely bright light and your eye will be dazzled (like looking directly at a camera flash) for a while.
2. Each laser spot damages a very small, microscopic part of the retina. In the first few days after treatment, you might notice small dark spots in your sight. This will settle and will not cause any noticeable problems.

Serious complications are rare and include:

1. If many spots of laser are required, there might be some reduction of sensitivity of vision that is not obvious but could lead to problems with fine tasks such as reading. This is more likely to happen if you require multiple

treatments. With extensive treatment, small patches of visual loss (scotoma) could lead to significant problems including loss of driving licence – this is very rare.

2. With time, laser scars can become larger and this could lead to a gradual loss of sensitivity of the retina.
3. Very rarely, the laser can directly damage the centre of the retina (“macular burn”). This can cause immediate and severe loss of sight, but occurs in less than one in a thousand cases.

Important: Laser is only used when the specialist feels that there is a serious risk of damage to vision due to DME. In some eyes, vision can deteriorate very rapidly due to DME. Sometimes, this can happen soon after laser, either because there has not been enough time for the laser to work, or because the laser has been ineffective. This rapid loss of sight is not due to the laser, but to DME.

Is the treatment Painful?

Laser for DME is not painful.

A special contact lens is used to focus the laser onto the retina. Before placing this lens on the eye, the doctor will instil some drops of anaesthetic to numb the surface of the eye.

Some eyes are extremely sensitive to light (“photophobic”). If you find it difficult to tolerate the laser light, it is possible to administer a more complex local anaesthetic (Sub-Tenon’s anaesthesia) that will dull your vision for a while and make the procedure more comfortable.

This same, more complex anaesthetic might be used if you are unable to keep your eyes still during the procedure as this makes safe treatment difficult.