Ophthalmology Department

Laser Treatment for Diabetic Retinopathy

There are two main types of diabetic changes in the retina that can benefit from laser treatment.

1. **Diabetic Maculopathy**
2. **Proliferative Diabetic Retinopathy**

1. Diabetic Maculopathy

The main stay of treatment for central diabetic maculopathy is injection with anti-VEGF in the eye. Some non-central diabetic swelling can be treated with laser to reduce the leakage.
When this fluid causes waterlogging of the middle part of the retina vision becomes blurred.
If the waterlogging persists, then permanent damage might occur and vision might not recover.

We know from careful scientific studies done in the early 1980s that laser treatment at the appropriate time can reduce the risk of moderate visual loss by half.

There are some small risks involved with laser treatment. Sometimes the scars can cause small patches where you can tell there is missing vision

The doctor will advise you when the leaking is bad enough to justify laser treatment. Not all leakiness is treatable and not all patients respond to the treatment. If this is the case, injections into the eye can treat fluid in the centre of the retina.

One type of Diabetic Maculopathy is not due to leaking blood vessels and should not be treated with laser. If it is not possible to tell by looking in your eye whether laser is required you may be asked to undergo a photographic test called fluorescein angiography which will help tell if there is leakage and where it is coming from.

2. Proliferative Diabetic Retinopathy

This type of diabetic eye disease is due to damage to small blood vessels causing a lack of circulation in the retina. When this occurs, not enough oxygen gets to the retina and the body's response to this is to try to grow new blood vessels.

Unfortunately, these new blood vessels are abnormally fragile and they do not grow in the proper place. They easily break and bleed causing loss of vision because of the blood in front of the retina at first, and then later, because of permanent scarring of the retina.

Laser treatment when these new blood vessels are first identified can reduce the risk of severe visual loss by around 60%.

The laser can reduce you peripheral vision and night vision and sometimes there is a reduction in the central vision as well.
Loss of peripheral vision can result in the loss of your ability to hold a driving licence.

We are aware of this and of how important driving is to people. We apply the laser in such a way as to minimise this risk while achieving the goal of making the new blood vessels shrivel up and go away.

It is important to recognise that once you have new blood vessels there is a very high risk of blindness if you do not have treatment so it is important not to let the risk of laser treatment put you off.

If your eye fails to respond to laser reatment for proliferative retinopathy there are surgical treatments available if you have a major haemorrhage which fails to clear.

How is laser treatment carried out?

The laser is a very intense highly focused light that causes a tiny lesion on the retina. You will sit at a slit lamp microscope like the one you have been examined with in the clinic room.

The doctor will put some local anaesthetic drops in your eye and then place a special contact lens on your eye to help focus the light. It also helps to keep your eye open and to prevent your eye from moving as much. It is helpful if you can keep your other eye open and find something suitable to look at in the room. The doctor will usually tell you where to look.

The laser is a series of bright flashes of light, each lasting only about one tenth of a second.

For maculopathy a small number of shots are delivered.

For proliferative retinopathy up to 3000 shots or more may be required but these may be given on more than one treatment session.

Once the decision has been made it is best to get the whole treatment completed within a few weeks.

The laser may be a little uncomfortable. Most people find that the first few shots are extremely bright but after the eye has adapted the rest of the treatment is tolerable.

For the more extensive treatment for proliferative retinopathy, which can be painful in some patients, you may have a local anaesthetic like the one we give to patients who have a cataract operation. The injection will make the procedure pain free. It also helps keep your eye still so that the treatment can be completed very much faster. Please feel free to ask for this anaesthetic at any stage.

Finally, diabetes is unfortunately a permanent problem and eyes, which have responded to treatment initially, can develop further changes requiring more laser. That is why it is very important that you have regular check ups in the eye clinic.

If for some reason you do not have a follow-up appointment or have missed an appointment please ring the hospital on:

Appointments Centre
Telephone No: 01484 355370
8.30am - 5.00pm Monday to Friday

If you have any comments about this leaflet or the service you have received you can contact :

Ophthalmology Department

Telephone: 01484 355085

www.cht.nhs.uk

If you would like this information in another format or language contact the above.

Potřebujete-li tyto informace v jiném formátu nebo jazyce, obraťte se prosím na výše uvedené oddělení

Jeżeli są Państwo zainteresowani otrzymaniem tych informacji w innym formacie lub wersji językowej, prosimy skontaktować się z nami, korzystając z ww. danych kontaktowych

ਜੇ ਤੁਸੀਂ ਇਸ ਜਾਣਕਾਰੀ ਬਿਸ ਦੇਸ ਪ੍ਰਾਰੂਪ ਜਾਂ ਭਾਸ਼ਾ ਵਿੱਚ ਲੈਣਾ ਚਾਹੁੰਦੇ ਹੋ,
ਤਾਂ ਬਿਨਪਾ ਕਰਕੇ ਉੱਪਰੋਕਤ ਵਿਭਾਗ ਵਿੱਚ ਸਾਡੇ ਨਾਲ ਸੰਪਰਕ ਕਰੋ।

اگر آپ کو یہ معلومات کسی اور فارمیٹ یا زبان میں درکار ہوں، تو
برائے مہربانی مندرجہ بالا شعبے میں ہم سے رابطہ کریں.

"إذا احتجت الحصول على هذه المعلومة بشكل مغاير أو مترجمة إلى لغة مختلفة فيرجى منك الاتصال بالقسم المذكور أعلاه"