

## Ophthalmology Department

# Anti-Vegf Therapy for Wet Macular Degeneration A Guide for Patients

You have been given this information booklet because the eye specialist has offered you the opportunity to have this treatment. Before you agree to go ahead it is very important that you have considered whether this is right for you because:

1. When you decide to have the treatment you are committing to at least two years and often more of regular visits to hospital with repeated treatments in order, in most cases, to simply maintain the vision you have at present in the eye being treated (in some cases the vision can increase).
2. The treatment is a big commitment, and should only be used where there is an expectation of success and where you are committed and able to attend eye clinic appointments on a regular basis (every 4 to 8 weeks on average)

### **What is wet macular degeneration?**

Wet macular degeneration is a condition where tiny blood vessels grow through weak areas caused by aging under the retina at the back of the eye (and occasionally some other predisposing conditions). The retina is the light sensitive nerve membrane which is like the film in a camera. The images of the world which you see are focussed on the retina. If it is damaged you cannot see properly.

In macular degeneration the central part of the retina is affected. The abnormal blood vessels leak fluid and can bleed causing distortion of vision and eventually scarring which can result in very poor central vision. People with macular degeneration find that they cannot see detail such as print or faces but the peripheral vision is maintained so that it is still possible to manage, albeit with some difficulty, in ones own home.

The aim of treatment is to prevent the scarring from developing to the stage where it is difficult to manage and if possible to stabilise the eye at a level where it is possible to continue a fairly normal life.

## **What will happen at each hospital visit?**

After you have registered at the appointments desk you will have your vision tested by a member of staff who will then put dilating drops in your eyes.

When these have worked you will have an OCT scan of the back of your eyes which allows us to assess whether there is fluid within or under your retina. (Only if your appointment is to have a review first before the injection)

These scans will be reviewed by a clinician (doctor, nurse practitioner, or optometrist with special training in management of wet macular degeneration).

At your first visit you may have a photographic test called a fluorescein angiogram to help decide what type of macular degeneration you have.

A decision is then made as to whether you are eligible to be offered Anti-Vegf treatment on the National Health Service. This is done according to national guidelines set by NICE (National Institute for Health and Clinical Excellence).

Just because you are eligible for treatment under these guidelines does not necessarily mean that it is right for you. That is why you are being asked to read the rest of this booklet.

Because these clinics are designed as One-stop clinics so that consultation with the specialist, tests and treatment can be given at the same visit you should expect to spend up to two hours or more with us but this saves the inconvenience of two or three clinic visits each month to have each part done separately.

## **How is the treatment given?**

The treatment is given by injection using a very fine needle through the white of the eye.

Before you have the injection you will be given local anaesthetic drops and, disinfecting drops.

The specialist will be gloved as for any surgical procedure. Your skin and eye will be cleaned with antiseptic and a plastic adhesive drape will be used to cover the area during the procedure to minimise the risk of introducing infection.

The procedure will take about 5 -10 minutes altogether and you will be able to get up and walk out.

## **How does it work?**

The blood vessels growing under the retina are produced in response to a chemical produced in the eye called Vascular Endothelial Growth Factor (VEGF). Anti-Vegf treatments work by inhibiting this molecule. However, more Vegf is often formed and that is why repeated injections are often required. One Anti-Vegf injection last from 1-2 months.

## **What is the success rate?**

About 55 out of 100 people having this treatment maintain stable vision over two years.

About 25 in 100 will see some improvement.

It is important to remember that amongst those showing some improvement people with relatively poor vision to start with rarely improve sufficiently to read normally.

## **How many injections will I need?**

All patients will have 3 injections at monthly intervals to start with and then further injections as indicated by further scans and response.

An average of 7-9 injections are required in the first year and 5-6 injections in the second year.

Some people may only need 3 injections before the process stops, whereas some need injections every month or two.

For some patients a 'treat and extend' protocol will be used where by giving an injection at every visit and extending the follow-up visit if appropriate. We are treating 'before' the leakage occurs and we have seen that overall less injections are therefore required.

## **What are the risks of Anti-vegf injections?**

Anti-vegf injections are overall a very effective and safe treatment, but like all drugs there are possible adverse effects.

People undergoing treatment are at risk of

1. Infection within the eye.
2. Haemorrhage on the surface or within the eye.
3. Damage to the delicate tissues within the eye such as the lens or retina.
4. Stroke / Heart Attack.

Infection can be very serious which is why we take great care to avoid it. It can lead to total loss of vision or even loss of the eye. Your injection would be postponed if we see any signs of infection around your eye at any visit. Using these precautions the infection rate is less than 1 in 1000 injections.

Haemorrhage on the surface of the eye is common and does not cause a problem with sight. It is due to a small surface blood vessel bursting when the needle is passed through the surface tissues. It looks much more alarming than it is and it will go away in 1-2 weeks in most cases.

Haemorrhage inside the eye is very rarely due to the injection itself. The blood vessels we are treating can bleed with or without this treatment.

Damage to other structures is also extremely rare as long as the specialist takes care and the patient keeps still during the procedure.

During initial scientific studies to find out if Anti-vegf was more effective than no treatment there was a very small increase in the number of people having a stroke during the 2 year follow up in patients who received some Anti-vegf compared to the group of patients who received a dummy injection.

In the age-group affected by macular degeneration there is a significant incidence of stroke over a two year period anyway and if a patient having Anti-vegf suffers a stroke there is no way of knowing whether this caused it or if it would have happened anyway.

### **What is the risk of my other eye developing a similar problem?**

When you have wet macular degeneration in one eye the risk of developing it in the other eye over the next five years is between 10% and 50% depending upon the presence and severity of any dry macular degeneration. The specialist can tell you about the other eye so you can understand that risk better.

### **How will I know if it does?**

When wet macular degeneration occurs it causes a puddle of fluid to develop like a little blister under the retina. This leads to distortion of vision so that straight lines appear curved or bent. If you have wet macular degeneration in one eye you might be able to use an Amsler chart (a grid of lines) to check for distortion starting in the other eye.

Wet macular degeneration causes bending or curving of the lines. Dry macular degeneration can cause finer irregularity of the lines. What is important is if you see a change.

You should close or cover your poor eye and check the good eye by looking at the dot in the middle wearing your reading glasses once a week.

## **Is there anything I can do to reduce the risk to my other eye?**

A large element of the risk is in your genes so you cannot alter that.

However there is good evidence that smoking markedly increases the risk so every effort should be made to stop if you do. Your GP should be able to organise support for that.

There is also some evidence that a healthy diet may play a part in protecting you against macular degeneration if it contains the right vitamins, anti-oxidants, minerals and pigments. These are mainly contained in green leafy vegetables such as kale, spinach, broccoli, red and yellow peppers, salmon and mackerel twice - three times a week also recommended. High levels of these compounds can be taken as a supplement and the NHS locally has agreed that Viteyes original can be prescribed for non smokers.

You may read about other things that may have a protective effect such as lutein, zeaxanthin and meso-zeaxanthin as well as Omega-3 fatty acids. These are still the subject of on-going research and are not currently available on the NHS locally.

## **What else should I consider when making my decision?**

We are all different. Some people decide to have any treatment which is offered. Some people only want to have treatment if they feel it is essential. We all perceive risk in different ways too.

Some people will think that the benefits of treatment outweigh the risks and the inconvenience of long-term visits to hospital every month. Others would prefer not to come for what they feel is relatively little benefit.

As we age things happen to our bodies as part of the aging process. Some people accept this and are prepared to live with some disability and others cannot bear the thought of things going wrong.

Depending on our lifestyle some of us find perfect vision essential others can manage perfectly well with partially impaired sight.

It is possible to live a perfectly normal life with only one good eye. There are many young people who do so for their whole life doing a whole range of occupations and holding a driving licence.

So, if you have perfectly good vision in one eye and wet macular degeneration in the other which has already quite seriously impaired the vision it might be perfectly reasonable to decide to let nature take its course in the affected eye and to get on and lead a normal life with the good eye.

In this case the risk you take by not having treatment is the risk that the other eye might develop wet macular degeneration or some other disease which would eventually make it worse than the currently affected eye.

Because you now know what macular degeneration is and can take steps to look for it yourself in the good eye there is an excellent chance that you could start treatment very early if it develops and therefore maintain good vision in this eye.

In the end what is important is that you weigh up these issues and decide what is right for you. It should be a positive choice one way or the other, not just an acceptance that one should have it just because it can be used.

We hope that this booklet has helped you to understand what is involved and to make that decision.

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

Eye Department Outpatient Sister  
Calderdale Royal Hospital  
Telephone (01422) 22241

[www.cht.nhs.uk](http://www.cht.nhs.uk)

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

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