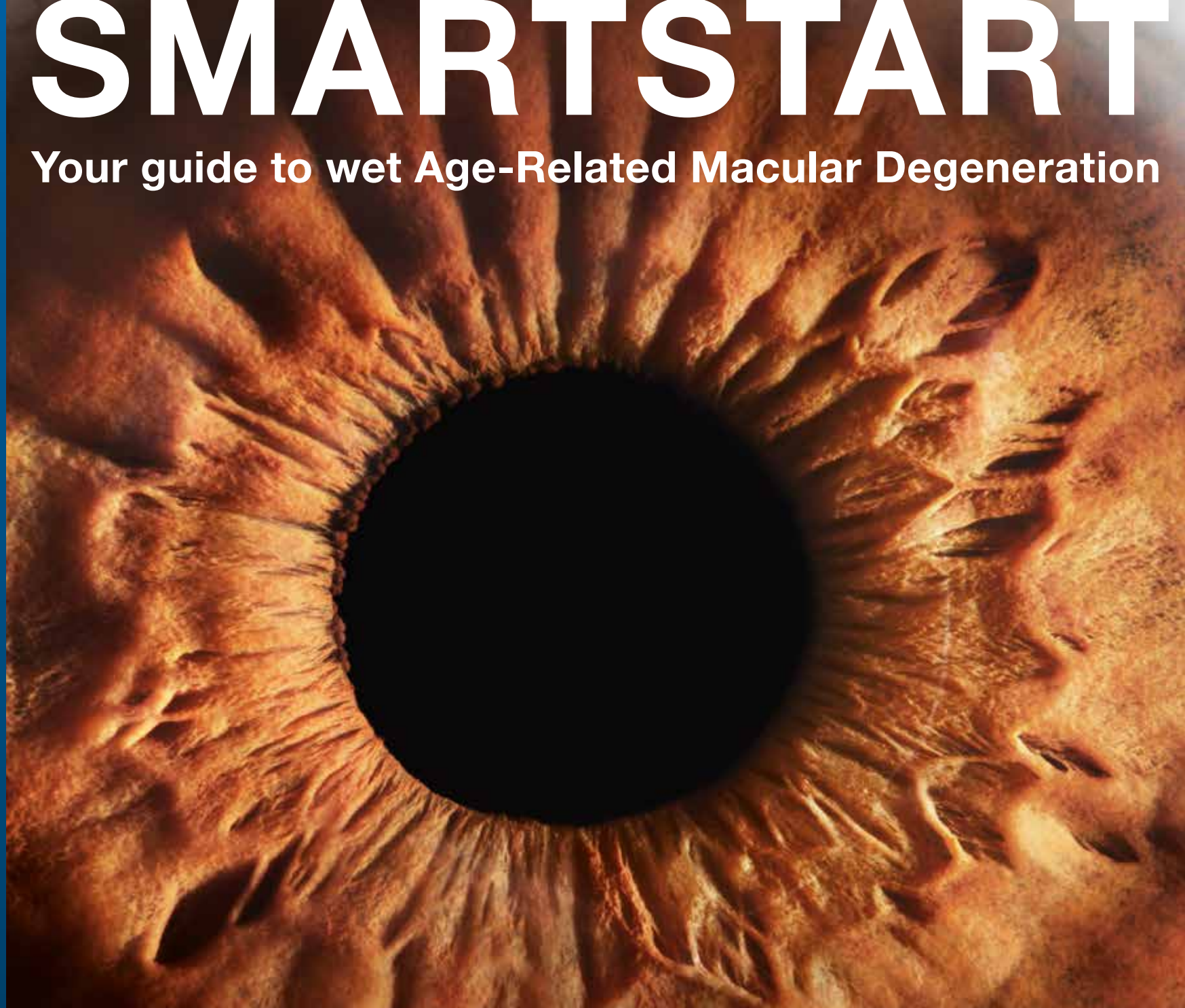
SMARTSTART

Your guide to wet Age-Related Macular Degeneration



The essential read for everyone prescribed anti-VEGF therapy

Produced by Bayer as a service to patients prescribed an anti-VEGF therapy.
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See the adverse reporting statement on the final page of the booklet.

BAYER

Introducing your condition

- **Understanding your eye**
- **What is wet AMD (age-related macular degeneration)?**
- **How does wet AMD affect your vision?**
- **What causes wet AMD?**

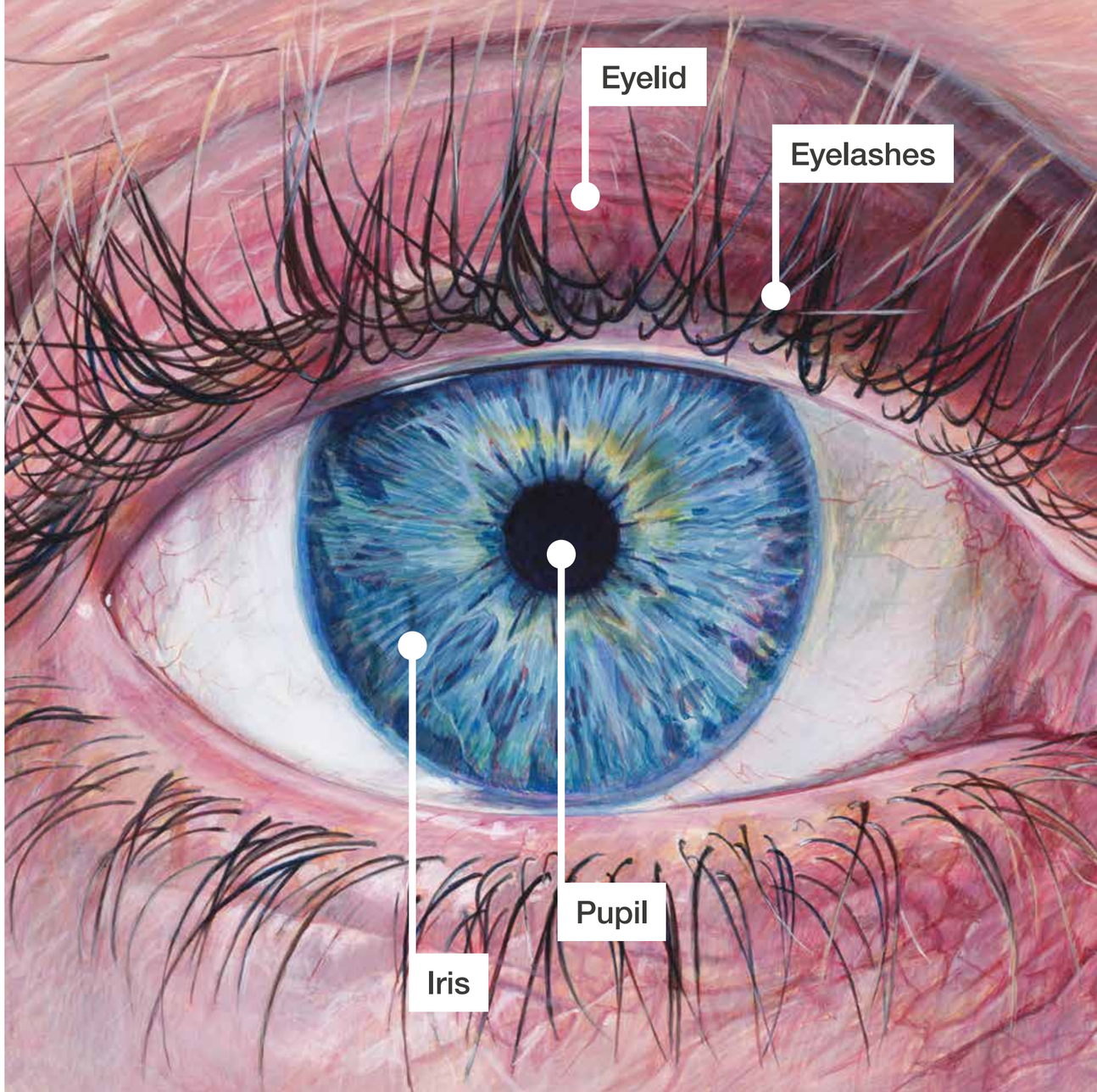
Understanding your eye

To really understand your condition, you need to be familiar with the important parts of your eye and how they help you to see the world. Don’t worry, it’s not complicated. Use the accompanying illustrations to help discover how one of the most beautiful parts of your body works.

Let’s take a look…

Your eye is made up of various structures. Each plays a vital role in helping you to see.

On the outside, you should be familiar with your **eyelashes** and **eyelids**. These protect your **cornea**, a transparent layer that sits in front of your **iris**, the coloured part of your eye, and your **pupil**, the black circle in the centre of your iris that lets the light in.

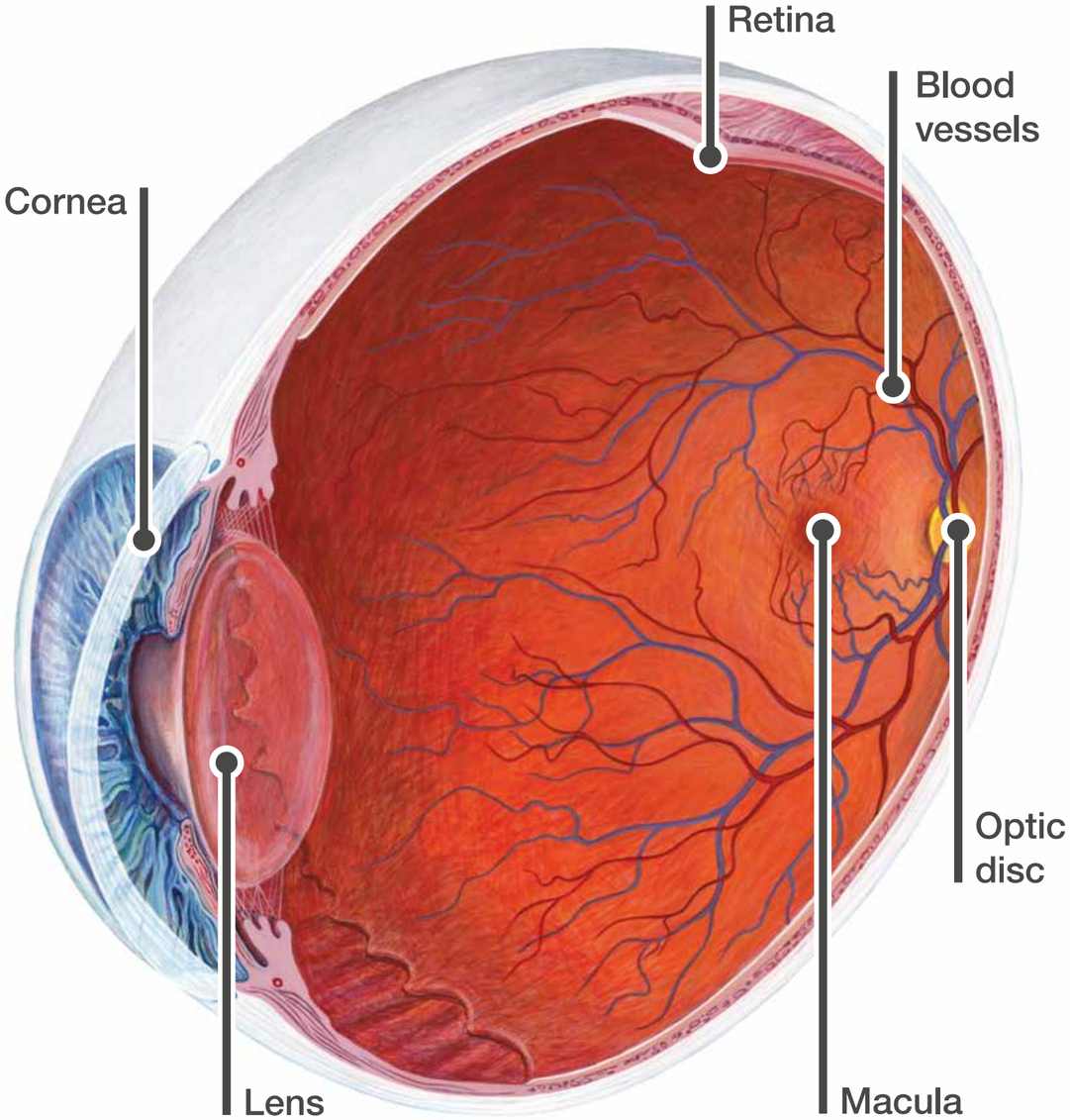


Behind your pupil sits the **lens**, a transparent structure that focuses the light onto the **retina** at the back of your eye.

Your retina is made up of a number of very thin layers of cells. One of these layers contains cells called photoreceptors, which are sensitive to light and essential for vision. When light falls on the photoreceptors they send a signal to the brain, which is interpreted as an image.

The only point on your retina that doesn't contain any photoreceptors is the **optic disc**. This is where the optic nerve leaves the eye, carrying information about what you see to your brain.

The **macula** is an area about the size of a pinhead in your retina. It contains a much greater number of photoreceptor cells. This makes it particularly sensitive to light, allowing you to see sharp, fine detail in the centre of your vision. It's a bit like a high-definition television, and is part of the eye affected by wet age-related macular degeneration (AMD).

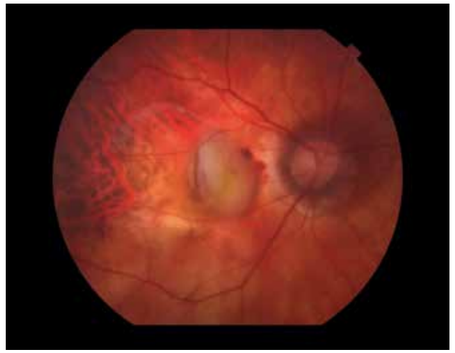


What is wet AMD (age-related macular degeneration)?

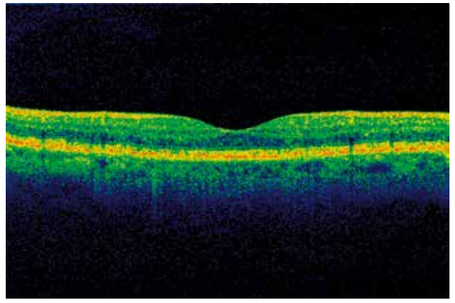
As we get older, the sensitive layers that make up the retina and macula can deteriorate. There are tiny blood vessels that run throughout these layers that carry oxygen and other useful substances to the retinal cells, and take waste products away.

If they become damaged as part of broader deterioration, they can leak blood and fluid into sensitive areas like the macula, causing swelling and possible scarring. This leakage is why we refer to it as ‘wet’ AMD.

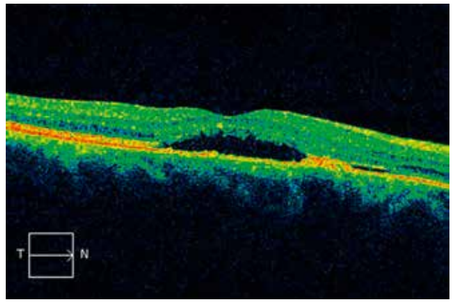
In people with wet AMD, abnormal blood vessels can also grow under the retina and break through it, altering the position of the cells and photoreceptors, and therefore distorting central vision.



The small central portion of the retina, known as the macula, deteriorates



OCT (Optical Coherence Tomography) scan of a section through the macula of the retina in a healthy eye



OCT scan of a section through the retina of the eye of a patient with AMD, showing macular degeneration

How does wet AMD affect your vision?

Macular degeneration affects different people in different ways. Wet AMD can cause fairly rapid, painless changes in vision over a few days or weeks.

Usually the peripheral vision outside the line of central sight is not affected, but changes to the macula result in some typical symptoms, such as:

- Blurred or patchy central vision – makes it difficult to read small or faint print
- Difficulty recognising faces
- Straight lines appearing kinked or wavy (see example to the right)
- Changes in colour, shape or size of familiar objects
- Finding glare from sunlight or lights uncomfortable
- Difficulty adapting between bright and dark environments – takes longer to see again properly when you go indoors

What causes wet AMD?

The exact cause of wet AMD is not known, but a range of risk factors have been identified:

- **Age –** wet AMD is most common in people aged 65 and over
- **Genetics –** you may be more likely to get wet AMD if any of your close relatives have it
- **Smoking** – smoking damages blood vessels and can greatly increase your risk of developing wet AMD
- **Blood pressure –** high blood pressure might increase the risk of developing wet AMD
- **Diet –** a poor diet, low in fruit and vegetables, may increase your risk of developing wet AMD

Improving your general health will also improve the health of your eyes. Your doctor or nurse can give you advice on lifestyle changes, and will also talk you through the treatment options.

Let’s look at treatment for your eyes in a little more detail…

Treatment

- **Your treatment journey**
- **What to expect from your treatment**
- **Things to consider**

Your treatment journey

In this section we'll walk you through what you're likely to experience during your treatment, from initial diagnosis and examinations, to treatment and clinic visits, so that you have the complete picture.

Diagnosis 

Wet AMD can be picked up by your optician or through eye screening and retinal photography.

If wet AMD or a similar condition is suspected, you will be referred to hospital and you will be seen for further tests to confirm your diagnosis.

Examinations 

Throughout your treatment you will undergo at least some of the following tests:

A **vision test** is used to assess the clarity of your vision. It involves reading letters from a screen or board a certain distance away, and may be slightly different to the test usually done by an optician.

A **slit lamp examination** is where a bright light is used with a microscope to let the doctor or nurse examine various parts of your eye, including the macula. Using different lenses allows different parts of the eye to be seen in more detail.

Dilation involves putting drops into your eyes to dilate your pupils. This means they get larger, allowing more light to get in so the doctor or nurse can see the back of your eye more clearly. It will make your vision blurry for a while. This won't last long, but it's important you don't drive while your pupils are dilated.

Fundus photography is photography of the back of your eye, which is used to produce sharp images of the retina, its blood vessels, and the optic disc. It's a painless procedure that involves the use of a specially designed camera after the pupils have been dilated.

OCT, or **Optical Coherence Tomography**, might sound complicated, but it's really just a light that scans your retina. It's a painless test that visualises all the different layers, producing a sort of map that lets the doctor or nurse measure its thickness. This is important for understanding exactly what's happening around your macula and measuring how much swelling there is.

Fundus angiography is a procedure where dye is injected into your bloodstream – usually via a vein in your arm. It highlights the blood vessels at the back of your eye, which helps your doctor or nurse see where new vessels are growing and how leaky they are. Depending on what needs to be visualised, different dyes may be used.

OCT-angiography can be used to determine the size of the damaged area. A single photograph is taken of the back of the eye without the use of a dye.

Treatment 

Treatment is more likely to be effective early on in the condition, before too many new blood vessels have formed or structural damage to the macula has started.

Wet AMD is usually treated using anti-VEGF (vascular endothelial growth factor) therapy. You will need to attend a clinic for your treatment, and you may need to continue on a long-term basis to prevent your condition from getting any worse.

Frequency of your treatment will depend on a variety of factors. There are two main treatment schedules.

Treat-and-observe: you will receive a series of scheduled treatments – usually every month – after which your doctor will regularly assess you, giving you further treatments as required.

Treat-and-extend: you will continue to have regular treatments, but the time between them will gradually extend whilst keeping your condition stable.

Clarify your schedule with your doctor and remember to attend all clinic appointments to keep your wet AMD in check.

Everyone responds to anti-VEGF therapy in different ways, depending on you as an individual and the severity of your wet AMD.

Treatment: how it works 

VEGF is a naturally occurring protein in your body that causes new blood vessels to grow and leak. Anti-VEGF therapy is so-called because it stops VEGF from working. So, it slows or stops the growth and leakage of new blood vessels, and therefore prevents your condition from getting worse.

Treatment: the injection 

Anti-VEGF therapy is given as an intravitreal injection. This means the drug is injected into the eye. Although this doesn't sound nice, people usually say it is much less unpleasant than they imagined.

You will be asked to lie down, and your eye will be gently held open for you; your face and the area around your eye may be covered with a sterile drape. The doctor or nurse will use some drops to anaesthetise your eye (make it numb), and will also disinfect the surrounding skin and the eye itself.

The injection will only take a few seconds. You may feel a little pressure, and occasionally there may be some discomfort during and afterwards. Your doctor or nurse will advise you on whether to take normal painkillers if needed.

You may experience a red or bloodshot eye that feels sore and gritty for a day or two, or see blobs and small specks in your vision for a few days afterwards.

Before you go home after the injection, make sure you have been given instructions on what to do and who to contact if you have any problems or concerns. Always follow these instructions and seek medical advice should you have any persisting symptoms in your eye or have any other concerns after the injection.

You will be given more information about your treatment, and possible side effects, at your appointment.

Like all medicines, there are some risks associated with the use of anti-VEGFs.

The most common side effects include pain in the eye, redness of the eye, vitreous floaters (moving spots in your vision) or detachment (the gel-like substance inside the eye pulling away from the retina).

Rare side effects, which may be serious, include raised pressure in the eye, retinal detachment, damage to your lens or retina, and bleeding, infection or inflammation inside the eye.

It's important you tell your doctor if you've ever had a stroke, transient ischaemic attack (mini-stroke) or heart attack as there might be an increased risk with anti-VEGF treatment.

Please read the patient leaflet carefully before you are given a medicine because it contains important information for you. If some things are unclear or if you experience any symptoms you're concerned about, speak to your doctor or nurse.

What to expect from your treatment

Anti-VEGF therapy generally has a good response rate. Most patients' wet AMD stops getting worse, and some even experience an improvement in how well they can see.

This will obviously depend on how well you respond to the treatment, but in a lot of cases, after one year of treatment, patients enjoy an improvement that makes a real difference to everyday tasks.

This is not always the case, however, and it may be that you do not respond to the treatment. In this case your condition and eyesight may still continue to deteriorate.

Treatment is long term, so even if you do respond to it and injections become less frequent after a while, you may need to continue with it for years.

Things to consider

Your first injection might be given on the same day as your diagnosis. However, depending on which clinic you visit, you may need to return another day for your treatment.

Contact lenses get in the way of any examinations and procedures, so make sure you have your lens case and glasses with you.

Driving is not possible after attending your appointment as your pupils may need to be dilated for an examination. You will need to make alternative arrangements, which may include asking somebody else to take you home.

Advice for managing your condition

- **Lifestyle**
- **The importance of treatment**

Lifestyle

As well as receiving treatment for your condition, there are certain small changes you can make to your lifestyle to help improve the health of your eyes.

Stopping smoking is one of the most beneficial things you can do for your eyes, and for your health in general.

It’s a good idea to protect your eyes from direct sunlight, for example by wearing a hat with a brim or sunglasses that block UV light.

You should also pay attention to your general health, including what you eat. A balanced diet is important for people with wet AMD.

Let’s look at some simple ways to achieve this...

Diet 

A balanced diet with plenty of fresh fruit and vegetables is good for your general health, and may also improve the health of your eyes.

People who eat a lot of fruit and vegetables have a lower incidence of wet AMD, as do those who eat fish regularly. Eating a lot of saturated fats – like those found in full fat milk, cheese and butter – increases your risk of developing the condition.

Here are some of our top tips for kick-starting some healthy eating habits.

Eat plenty of fruit and veg – antioxidants are generally found in brightly coloured fruits and vegetables, such as red grapes, peppers, broccoli, oranges, and mango. Eating fresh produce in a range of colours will include a wide range of vitamins in your diet. Certain antioxidants have a protective effect on the eyes. Dark green leafy vegetables, like spinach and kale, contain high levels of antioxidants called lutein and zeaxanthin, which are thought to protect the eye from UV light, like a natural sunblock for the macula.

Get your five-a-day – you should try to eat at least five portions of fruit and veg per day. As well as providing useful vitamins, they're also high in fibre. While this may sound like a lot, a serving is only about half a cup of most foods, or one cup of greens. Remember that, while juice is healthy, everything should be taken in moderation. Eating 10 oranges in one go wouldn't be healthy, so don't drink this much juice either – the recommendation is one small glass a day.

Eat more beans – beans, lentils and pulses are low in fat, high in fibre, cheap to buy and packed with nutrients. They may also help to control blood fats, such as cholesterol.

Dish up the fish – fish is a good source of protein, and oily fish is rich in omega-3, which protects against heart disease and also appears to be an important nutrient for the eyes. Aim for a couple of portions a week. Fresh, frozen and some canned fish are good. For canned fish, note that some (like tuna) lose their protective benefits when canned. Choose canned fish in spring water, and remember to look out for added salt.

Cut back on salt – too much salt in your diet is associated with high blood pressure. Have no more than one teaspoon (6g) of salt per day. Processed foods are high in salt, so cut back on these and try to cook from scratch, flavouring your food with herbs and spices instead.

Stay hydrated – drink between 8 and 10 glasses of fluid per day. Water is best, but milk, low-calorie drinks, tea and coffee (ideally decaffeinated), and even soup, all contribute to this total.

Alcohol – alcohol destroys antioxidants. Although you don't need to give it up completely, there are clear guidelines that you should try to stick to. You should drink no more than 14 units a week, ideally over three days or more. This is the same as 6 pints of average-strength beer, or 7 medium-sized glasses of wine. If you drink heavily, make sure you have some alcohol-free days too.

Staying active 

To maintain your general health, it's important to stay active.

This could include things like doing the gardening and housework. Or if you use the bus, could you get off a stop early and walk the rest of the way?

Little changes can make a big difference to your health and how you feel.

The importance of treatment

Nobody likes having to go to the hospital. But the consequences of missing appointments can be very serious for your health. Wet AMD can develop very suddenly, and without prompt treatment it is more likely to cause permanent damage to your vision. Your medical appointments can help to prevent your condition from getting any worse and to maintain your sight.

Simple things can help. The most obvious is putting your next visit in the calendar.

If you're nervous or concerned about attending your appointments, talk to your doctor or nurse and ask a family member or friend to accompany you to your appointments. It's normal to feel apprehensive, but this shouldn't stop you from attending.

Remember, by keeping your appointments, you're helping to keep your vision.

Useful information and additional support

- **Further information and support**
- **Healthcare professional contact information**

Further information and support

If you are having difficulties, ask for help. Most eye departments have low vision teams who can advise you and if you are struggling there is lots of practical and emotional support available to help you. If your vision has dropped below a certain level then you may also want to consider registering your low vision with the local council for further benefits.

Don't struggle alone or in silence. Tell your nurse or doctor if you are finding it difficult to come to terms with your sight changes and the impact it's having on your life and ask how to access practical support to help you at home. Most hospitals have sight loss support officers and low vision teams who can assist you.

As well as the resources below, ask your doctor or nurse for a copy of our safety booklet.

www.macularsociety.org – information and support for anyone affected by macular disease. Or give them a call on 0300 3030 111.

www.nhs.uk/Conditions/macular-degeneration – find out what the NHS says about macular degeneration.

www.rnib.org.uk – support for people with vision loss from the Royal National Institute of Blind People.

Healthcare professional contact information

Use this space to note down the contact details of your clinic, doctor, nurse and any family members or friends who may be able to accompany you to your appointments.

If you experience any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via the Yellow Card Scheme https://yellowcard.mhra.gov.uk/

By reporting side effects, you can help provide more information on the safety of this medicine.

For further information, please contact Bayer Medical Information at:
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