

Treating Wet Macular Degeneration

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The first point of contact for treatment options should be with your eye specialist. In many cases this will be a retinal specialist. You should always discuss any concerns, questions or information you have obtained with your specialist. The specialist is in the best position to advise you on your treatment options.

Wet Macular Degeneration (MD) occurs when abnormal blood vessels grow from the choroid into the retina. This process is called choroidal neo-vascularisation (CNV). Neo = new and vascularisation = vessel formation.

There are currently four proven and two experimental treatments available for people with wet MD. The treatments are not curative and aim to keep the best vision for as long as possible.

TREATMENTS PROVEN TO BE EFFECTIVE BY CONTROLLED TRIALS published in peer review journals

An excessive growth of blood vessels in wet AMD causes bleeding, leakage and scarring which results in severe loss of vision. The blood vessels are prompted to grow by a protein called Vascular Endothelial Growth Factor (VEGF). An antibody, called an anti-VEGF, is injected into the eye and blocks this growth of blood vessels. These anti-VEGF drugs are injected into the eye cavity where they can spread to the retina.

1. Lucentis (ranibizumab)

Lucentis is an anti-VEGF drug which is injected into the eye at four week intervals. The two-year results of two separate trials have been reported and show this treatment is extraordinarily effective. Roughly 7 to 8/10 patients maintain their vision or notice improvement. Over one third still have vision in the affected eye that would enable them to legally drive a car.

Lucentis appears to be equally effective for all the types of Wet MD and for all lesion sizes. This treatment is available in Australia and is registered under the TGA (Therapeutic Goods Administration). Lucentis was listed from 1 August 2007 on the Pharmaceutical Benefits Scheme (PBS).

Patients should discuss details of the injections with their doctor.

Lucentis is currently in Phase 3 trials in Australia, looking at varying the frequency of administration and using it in combination with Photodynamic Therapy with Visudyne.

2. Photodynamic Therapy (PDT) / Visudyne Therapy

This is a two step process combining a light-activated drug (Visudyne) and the light from a non-thermal laser directed on to the abnormal retinal area. Once activated, the drug causes the blood vessel to close off.

PDT treatment does not cause direct damage to the surrounding retina. It therefore can be used to treat new vessels that are under the centre of vision (the fovea).

PDT is a course of therapy and several treatments are needed to keep the leaking blood vessels closed and stop the progression of Wet MD. Close follow up and monitoring with the attending eye doctor is needed to determine if further treatment is required.

Unlike Lucentis (in which the vision is usually maintained), patients having PDT continue to lose vision in the first six months; their vision then stabilizes so that the eye does not go on to as severe vision loss. Patients with large, poorly outlined CNV respond poorly to PDT.

3. Laser Photocoagulation

This treatment consists of a concentrated light beam of high energy thermal light which is directed on to the retina to destroy and seal the leaky blood vessels. A contact lens is placed onto the eye. The doctor will give instructions on where to look, so that the eye remains still while the laser is focused on the area being treated. This is not a painful procedure.

The laser not only destroys the new vessel (CNV) but also destroys the retina adjacent to the new vessel. Therefore it should only be used for treating new vessels that are not under the central vision. This is only a small percentage of patients who present with Wet MD.

Close follow up and monitoring with the attending eye doctor is needed to determine if further treatment is required, as there is a 50% recurrence rate.

4. Retaane (anecortave acetate)

This drug also inhibits the abnormal growth of blood vessels. It is an angiostatic cortisone derived from the steroid molecule but modified to remove the chemical groups responsible for the development of cataracts and elevated intraocular pressure leading to glaucoma, while preserving potency against angiogenesis.

This drug is administered through a tube called a cannula that is inserted behind the eyeball. It needs to be repeated every six months to maintain efficacy. The treatment appears to be as effective as PDT for some types of CNV. There are phase 3 trials being recruited to examine the use of Retaane in combination with one of the anti-VEGF drugs.

It has now been approved for use in Australia but no funding is available. The cost of the drug is \$1800 and does not include the cost of the procedure.

EXPERIMENTAL TREATMENTS

1. Avastin (bevacizumab)

Avastin is an anti-VEGF drug, like Lucentis, that is injected into the eye. It was not designed for use in the eye. It was primarily tested and approved for the treatment of cancer.

Avastin has been used worldwide in the past one to two years for treating patients with Wet MD. A number of case reports suggest that it is highly effective, but it remains unproven with regards to both safety and efficiency. Like Lucentis, it appears that Avastin needs to be injected repeatedly to maintain its effect. It is still not clear as to how often the injection should be given.

2. Triamcinalone (Kenacort)

A slow release steroid designed for injection into joints, has been used 'off label' by some retinal specialists to supplement CNV treatments particularly PDT. It seems to have a beneficial effect when used in conjunction with PDT but has been shown in a controlled trial to be ineffective as a sole treatment. It is injected into the eye but promotes cataract formation and in a third of patients increases the intraocular pressure often necessitating glaucoma treatment. The effect of one injection lasts a few months. Side effects increase with repeated injections.

Any decisions made about treatment options for Wet Macular Degeneration should be made in consultation with your ophthalmologist.

This Wet Treatments Fact Sheet is current as of August 2007



Above - Blank spots in central vision are associated with late stage MD

Right - How a normal building might look with distortion associated with Macular Degeneration

Eye Health Checklist*

- Have your eyes tested and make sure the macula is checked
- Don't smoke
- Keep a healthy lifestyle, control your weight and exercise regularly
- Eat a healthy, well-balanced diet. Limit your intake of fat; eat fish two to three times a week; eat dark green leafy vegetables and fresh fruit daily and a handful of nuts a week
- In consultation with your doctor, consider taking an antioxidant and zinc supplement.
- Provide adequate protection for your eyes from sunlight exposure, particularly when young

*** Any changes to diet or lifestyle should be undertaken in consultation with a doctor*

For further support and assistance call the MD Foundation's free helpline **1800 111 709** or visit www.mdfoundation.com.au



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The Amsler Grid

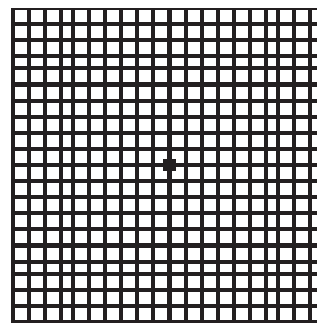
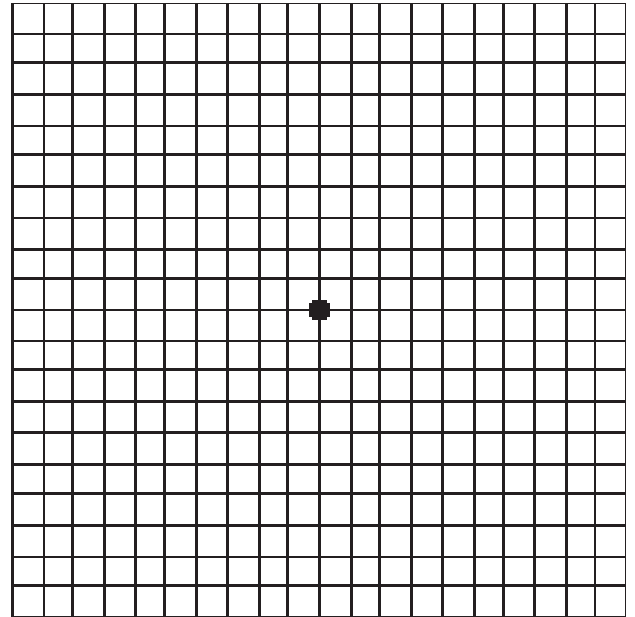
The Amsler Grid is a self test to detect changes in your vision. These changes may include wavy or bent lines, dark or missing patches and any other distortion. Any change should be reported immediately.

Directions

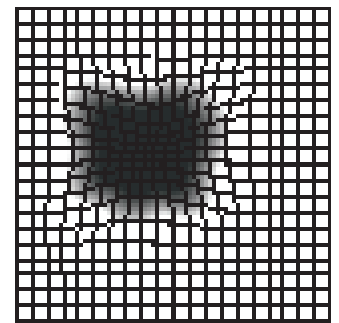
Do not remove glasses or contacts you normally wear for reading.

1. Stand approximately 33cm from the grid in a well-lit room.
2. Cover one eye with your hand and focus on the centre dot with your uncovered eye. Repeat with the other eye.
3. If you see wavy, broken or distorted lines, or blurred or missing areas of vision you may be displaying symptoms of MD and should contact your eye care provider immediately.

For a free Amsler Grid, please contact the MD Foundation on **1800 111 709**.



Normal Vision



Distortion

Do not depend on the Amsler Grid for diagnosis. It is important to have your eyes tested regularly by your eye care professional