



Age-related macular degeneration



Recognize symptoms and treat **early**

Bayer's Medinfo will help you with all questions related to Bayer products.

Telephone 020 785 8222

(on weekdays from 9 am to 3 pm)

medinfo@bayer.fi

Bayer Oy

Tuulikujja 2, 02100 Espoo

PO BOX 73, 02151 Espoo

Telephone 020 785 21



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AGE-RELATED MACULAR DEGENERATION, AMD, is a disease related to aging that gradually damages the region of acute vision, i.e. macula, but does not cause any pain. The region of acute vision is necessary for tasks requiring accuracy, such as reading, facial recognition and driving a car.

Macular degeneration is the most significant cause of vision loss in western countries. It is estimated that age-related macular degeneration occurs in about 10% of over 60-year-olds and in about 30% of over 80-year-olds.¹

There are two types of age-related macular degeneration: dry and wet. Dry age-related macular degeneration is clearly more common: it constitutes 80–90% of all cases.² In dry AMD, the symptoms are often milder and progression is slower than of wet AMD.

In the early phases of the disease, the so called drusen, i.e. extracellular deposits, are accumulated under the retina. The drusen may vary in size and quantity. Over time this condition may develop into dry age-related macular degeneration. In advanced dry age-related macular degeneration, there is an increase in the quantity and/or size of drusen. This is associated with the weakening of light sensitive cells, the region of acute vision and the surrounding tissue. This may cause vision problems.

Age-related macular degeneration may develop in one or both eyes. When it affects only one eye, it is more difficult to notice vision loss because the “better eye” works harder to compensate for the affected eye. For this reason you should visit an ophthalmologist regularly.

Although there is currently no treatment for dry age-related macular degeneration, the U.S. Food and Drug Administration found in its AREDS study³ that a vitamin supplement containing antioxidants and zinc may reduce the risk of AMD and associated vision loss. You should discuss the risks and benefits of vitamin supplements with your treating ophthalmologist.

If dry AMD is detected in the eyes, the situation is monitored closely in order to discover any possible changes that are indicative of wet AMD. If left untreated wet AMD progresses rapidly and may result in significant loss of central vision. Early diagnosis and regular treatment often help to preserve vision and in some cases it may be possible to restore the already existing vision loss. Unlike dry AMD, the wet type AMD can be treated – read more from this guideline.



1. Seppänen M. (2013) *Silmänpohjan ikärappeuma (makuladegeneraatio)*. Lääkärikirja Duodecim
2. Kostea *silmänpohjan ikärappeuma (AMD)*. Käypä hoito-suositus (2016). www.kaypahoito.fi
3. Age-Related Eye Disease Study Research Group. *Arch Ophthalmol.* (2001). 119(10):1417-36.

AMD risk factors

THE BIGGEST RISK FACTOR OF AMD is age. Also being female increases the risk. Over 60-year-olds have a much greater risk of developing AMD compared to middle-aged people. With an aging population, chronic diseases such as AMD become more common. Hereditary predisposition increases the risk of AMD. For this reason regular eye examinations are important if you have a family history of AMD.

Prevention

YOU CAN REDUCE THE RISK OF DEVELOPING AMD by stopping smoking, exercising regularly and eating plenty of vegetables and fruit. Obesity, diabetes and cholesterol are predisposing factors. The risk can also be reduced by decreasing exposure to strong UV light by using effective sunglasses and hats that protect your eyes.

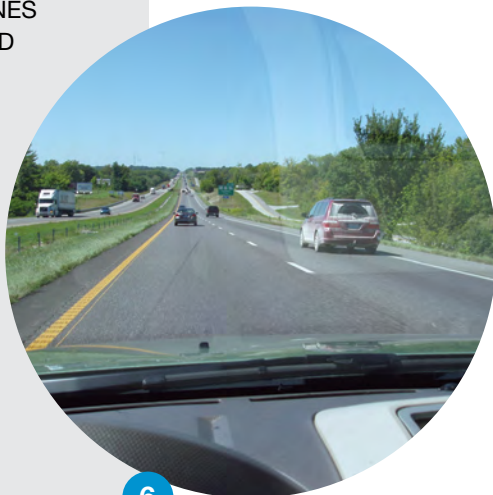


Recognize symptoms **early**

In wet AMD, abnormal blood vessels that leak blood and fluid develop under the region of acute vision i.e. macula. If untreated, this condition results in scarring of the retina and vision problems.

IDENTIFYING WET AMD is not always simple but distortion of straight lines or blind spots appearing in the field of vision may be indicative of this condition. Patients with wet AMD may also perceive the size of images to be altered. This is noticed best as altered character size or disappearance of characters while reading. Facial identification becomes often difficult and the exact outlines of objects may be blurred.

SYMPTOMS OF WET AMD MAY INCLUDE DISTORTION OF STRAIGHT LINES AND BLURRED VISION



DIAGNOSING WET AMD AND STARTING TREATMENT

as early as possible is important for preserving vision and stopping or slowing down its progress. The condition is often noticed only when the symptoms are clearly discernible and vision is already permanently impaired. Untreated wet AMD can progress to loss of central vision within two years from onset. People belonging to risk groups as well as those who have even minor symptoms should have their eyes and vision checked regularly by an ophthalmologist in order to ensure early diagnosis. You can monitor and test your own vision with the Amsler grid, for instance. The grid is available on the back cover of this guideline.



Treatment of wet AMD

WET AGE-RELATED MACULAR DEGENERATION CAN BE DIAGNOSED with a microscope examination carried out by an ophthalmologist. To confirm the diagnosis, an optical coherence tomography (OCT) is often also done and, if needed, contrast imaging of blood vessels.

THERE ARE TREATMENT ALTERNATIVES FOR WET AMD that may help to slow down its progress and in some cases even restore lost vision. Blood vessel growth factor inhibitors are administered into the eye as injections. In an injection to the vitreous humor, the drug substance is injected into an anesthetized eye with a thin needle. Drug injections to the eye prevent the growth of abnormal blood vessels.

Wet AMD is also treated using a laser with the aim of destroying the leaking blood vessels. This treatment method is suitable for some patients. Patients with wet AMD can be treated with photodynamic therapy in which a drug is injected into the patient's veins from where it also travels to the eyes.

MEASURING VISUAL ACUITY IS ONE OF THE EXAMINATIONS FOR AMD



After the injection, light is directed to the patient's eyes in order to activate the drug and destroy new blood vessels. This treatment slows down the progression of visual impairment. Photodynamic therapy is suitable for certain types of wet AMD.

In the treatment for wet AMD, it is important to remember that this is a chronic, progressive disease that requires continuous monitoring and regular treatment.



PATIENT READY
FOR BIOMICROSCOPE
EXAMINATION

New treatments
may even restore
vision loss

Independent life despite the disease

AMD MAY CAUSE
SURPRISING
DIFFICULTIES E.G.
IN CARRYING OUT
DAILY TASKS

Early diagnosis and starting treatment is important in preserving vision because vision loss makes many daily tasks and independent life difficult. The risk of falling over also increases with poor vision and therefore the patient should be trained in how to move safely both indoors and outdoors.

MANY WHO SUFFER FROM AMD GET HELP from rehabilitation services and tools meant for people with impaired vision, such as a white cane, magnifying glasses to help in reading, large print newspapers and books, easy-to-read watches and phones, bright lamps designed for accurate tasks, voice-activated computers and phones, and talking clocks and kitchen appliances.

It is important that the patient receives help and training in how to cope in daily life. In addition to rehabilitation services, psychosocial support and therapy help in coping with daily tasks, independent living and maintaining a meaningful quality of life.





Many **tools**
make life easier

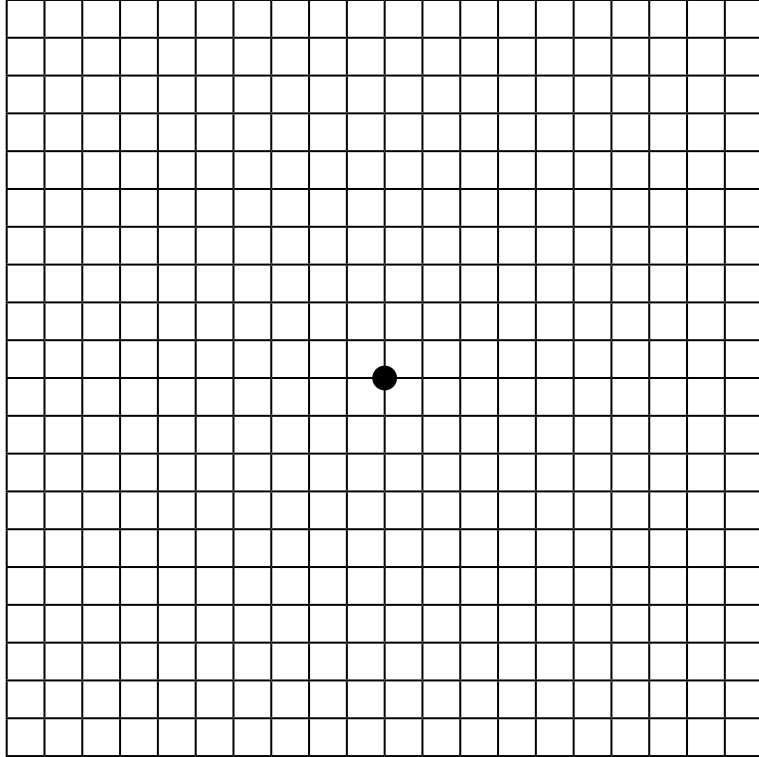
WET AGE-RELATED MACULAR DEGENERATION MAKES E.G. THE FOLLOWING DIFFICULT:

- Reading and writing
- Shopping
- Paying bills
- Watching television
- Preparing food
- Playing cards
- Using a computer
- Gardening
- Cleaning
- Doing handiwork
- Driving
- Using public transportation, e.g. identifying bus numbers
- Identifying faces
- Playing music
- Golfing, fishing and other outdoor hobbies

You can do a simple AMD test with the help of the grid on the back cover. In the test you should look at the black and white Amsler grid. If the lines seem distorted or in some other way abnormal, this may be a sign of a retinal disease. In such a case contact an ophthalmologist as soon as you can.

AMSLER TEST ▶▶▶▶▶▶▶▶

- 1.** If you use reading glasses, you should wear them also during the test. (Bifocals or multifocals may falsify the test result).
- 2.** Place the chart at a distance of 30 cm from your eyes. Cover one eye.
- 3.** Focus your eye at the black dot in the center of the grid.
- 4.** Repeat the test similarly with the other eye.
- 5.** If the lines in the grid are blurred, curved, irregular or diminished, contact an ophthalmologist immediately.



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