

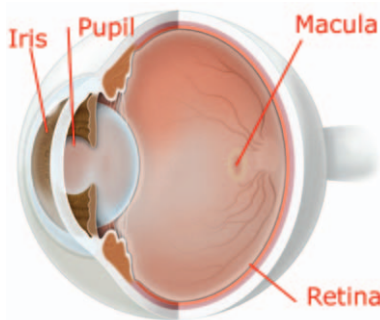


Patient Education & FAQ's

Macular Degeneration

Damage to the Eye

Macular Degeneration (MD) is an eye disease that results in a progressive, painless loss of central vision, leaving peripheral or side vision intact. This is because MD attacks the macula, which is the central part of the retina - the light sensitive tissue at the back of the eye which processes all visual images.



Risk Factors

MD is also commonly referred to as “Age-Related Macular Degeneration” (ARMD or AMD) as it is usually related to ageing and most frequently affects people over the age of 50. However, family history is also a risk factor and inherited forms of the disease can affect young people too. Anyone with a family history of MD has a 50% risk of developing the disease themselves.

Commonly named risk factors for developing Macular Degeneration include:

- **Age:** MD affects 1 in 7 Australians over the age of 50, with the incidence increasing with age.
- **Family History:** MD is hereditary with a 50% chance of developing MD if there is a family history of MD. This is 4 times the risk of those with no close relatives having MD.
- **High Blood Pressure:** (Hypertension): Having hypertension as well as other cardiovascular diseases increases the likelihood of developing Macular Degeneration.
- **Smoking:** Studies have shown that those who smoke are at 3 times the risk of developing MD. It is estimated that smoking may be responsible for around 20% of all new cases of blindness in people over the age of 50.



Macular Degeneration is usually age-related

- **Obesity:** Being overweight not only increases your risk of developing MD, it also increases the risk of developing the more severe forms of MD.
- **Sun Exposure:** Spending too long in the sun without UV eye protection appears to speed the development of MD.
- **Diet:** Studies have shown that eating a diet that is low in antioxidants, vegetables, fruit and fish is a risk factor for MD. It is believed that a modern diet of processed “convenient” food, high fat intake and high cholesterol can increase the incidence or severity of Macular Degeneration.

Symptoms

In some cases MD progresses so slowly that people fail to notice the gradual deterioration of their vision. In others, the disease progresses faster and may lead to permanent loss of central vision - this is the vision that is so important for things like reading, writing, driving, watching TV or recognising faces.

It is a common misconception that a decrease in vision is an inevitable consequence of getting older. Decreased night vision, sensitivity to glare, the need for increased illumination or poor colour sensitivity can mean there is something wrong.

If you experience any of the following symptoms, you should see your optometrist immediately:

- Distorted vision, where a grid of straight lines may appear wavy or bent.

Last edited: 28/02/11



An example of “tunnel vision” visual field loss due to glaucoma

- Blurred vision. A gradual decline in the ability to see objects clearly.
- Dark patches, shadows or empty spaces (scotomas) appearing in the centre of your vision. Parts of a grid of straight lines may appear blank.
- Difficulty reading or doing any other activity that requires fine vision.
- Trouble discerning colours - a dark colour from another dark colour, or a light colour from another light colour.
- Slow adjustment of vision after exposure to bright lights.

Types of MD

There are two different forms of MD: Wet and Dry:

The “Dry” form is more common and accounts for 90% of all cases. It results in a gradual loss of central vision. While no treatment is available, vitamins and antioxidants have been suggested by the National Eye Institute to slow the progression of dry MD.

The “Wet” form is characterised by sudden and significant changes in vision. It is less common than the “Dry” form, but more severe. The wet form is caused by abnormal blood vessels growing from the retina. These vessels can bleed and eventually cause macular scarring which can result in profound loss of central vision. Anti-angiogenic drugs can be used to cause some regression of the abnormal blood vessels.

Tips for Eye Health

Lifestyle also plays an important role in the health of your eyes. Macular Degeneration is thought to be caused by a combination of genetic and environmental factors.

Your best defence against MD:

- 1 Exercise regularly and maintain a healthy weight for your height.
- 2 Don't smoke. Smoking is a major risk factor for MD.
- 3 Have your eyes examined and your macula checked at least every 2 years.
- 4 Protect your eyes from UV light when outside in the sun.
- 5 Eat a healthy well-balanced diet. (See below).
- 6 Consider taking an antioxidant and zinc supplement to your diet.

Diet & MD

Diet plays an important role in the health of our eyes and can help reduce the risk of Macular Degeneration or slow its progression.



Scientific studies have shown that MD responds to antioxidants, vitamins, minerals & other nutrients. This is not an unpleasant diet, but simply emphasizes the benefits of vegetables, fruit and fish.

Lutein & Zeaxanthin are carotenoids that are particularly important antioxidants for eye health. Lutein is present in high concentrations in a healthy macula and needs to be frequently replenished.

It is found in especially high levels in leafy dark green vegetables such as spinach, silver beet and naturally yellow fruit and vegetables such as capsicum and sweet corn.

Dark chocolate contains a large amount of antioxidants. A small square (20g) every three days is useful, however eating more does not provide additional benefits.

Vitamin C is found in citrus fruits, papaya and rockmelon. Or vegetables like capsicum, peas and broccoli.

Last edited: 28/02/11

Vitamin E is found in nuts (almonds, pine nuts, brazil nuts), whole grains, leafy green vegetables, broccoli and carrots.

Omega-3 Fatty Acids have been connected with a reduced progression of MD. They are especially found in cold water fish.

Zinc is found in meat, seafood (especially oysters), nuts (pine nuts, cashews, pecans, almonds, brazil nuts) and whole grains.

Your diet and lifestyle has an impact on MD:

- Eat a healthy well-balanced diet.
- Avoid fatty foods.
- Include fish at least two times a week.
- Eat dark green leafy vegetables and fresh fruit every day.
- Include a handful of nuts once a week.

As an example, a scientific study of 6,700 people ^{Ref 1} found that those who eat 7 tablespoons of olive oil a week are almost 50% less likely to develop age-related Macular Degeneration than those who eat tiny amounts.

If you are concerned that you are not getting enough nutrients in your diet, you may consider using a supplement in consultation with your doctor.

Tests

A simple test for observing some of the changes with Macular Degeneration is the “Amsler Grid Test” or the “MRM Grid Test Recording Chart”. An example is shown opposite.

More Information?

If you have any questions about MD or advice about lifestyle changes you can make to either reduce the risk or slow the progression, ask your doctor or optometrist:

Other sources of information about Macular Degeneration Foundation include the following . . .

<http://www.macular.org/disease.html>

<http://www.mdfoundation.com.au>

http://en.wikipedia.org/wiki/Macular_degeneration

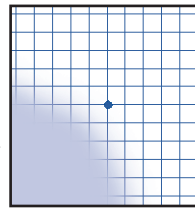
<http://www.nei.nih.gov/health/maculardegen>

MRM GRID TEST RECORDING CHART

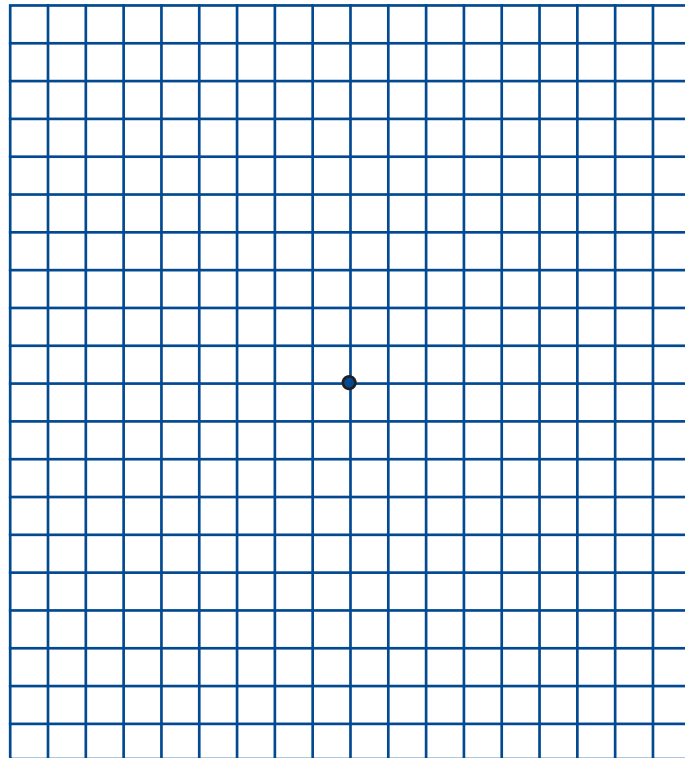
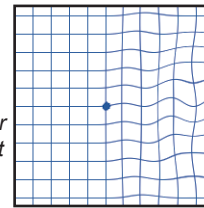
This test is used for Maculopathy, Retinopathy & Metamorphopsia. It is the clinical equivalent of the Amsler Grid Test.

Examples:

Dark patches or blank areas



Lines appear wavy or bent



PATIENT'S NAME:

COMMENTS:

Last edited: 28/02/11