LOOK TO YOUR FUTURE
Age-Related Macular Degeneration (AMD) and You
Introduction

AMD is a leading cause of vision loss in people 50 years of age and older.¹

As many as 15 million Americans have AMD.²

Many people think vision changes are a normal part of aging. But sometimes they are signs of a more serious problem. This booklet tells you more about AMD and how you can play an active role in your eye health.

Visit LookToYourFuture.com to learn more about managing your eye health.
If you are 50 years of age or older, get a dilated eye exam every year

AMD is an eye disease that

• Blurs central vision (what you see straight ahead)\(^1\)

• May affect your ability to\(^1\)
  – Read
  – Write
  – Drive
  – Watch TV
  – Recognize faces

• May make objects seem farther away than they really are\(^3\)
Where AMD Impacts the Eye

What is the macula?¹

AMD affects the macula, the part of the eye that allows you to see fine detail. The macula is in the middle of the retina.

The retina is a layer of tissue at the back of the eye. This layer has light-sensitive cells that send signals to the brain. These signals form the images you see.

The macula is the part of the retina responsible for your central vision.
### Risk Factors

**What are the risk factors for AMD?**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td>Common in people <strong>50 years of age and older</strong>. Your risk goes up as you get older.</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td>More women get AMD than men.</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td>Most common in Caucasians.</td>
</tr>
<tr>
<td><strong>Family History</strong></td>
<td>Your risk is <strong>3 to 4 times higher</strong> if you have a family member with AMD.</td>
</tr>
<tr>
<td><strong>Obesity</strong></td>
<td>Your risk is <strong>higher</strong> if you are very overweight.</td>
</tr>
<tr>
<td><strong>Smoking</strong></td>
<td>Your risk <strong>doubles</strong> if you smoke.</td>
</tr>
<tr>
<td><strong>Heart Disease</strong></td>
<td>Your risk is <strong>higher</strong> if you have had a disease affecting the heart and blood vessels.</td>
</tr>
</tbody>
</table>

Talk to your eye doctor right away if you have any of these risk factors.
Types of Eye Doctors

What are the different kinds of eye doctors?

It is important to see the right type of eye doctor for your needs. Each has a different level of training, skill set, and role in providing eye care.

Optometrist

An optometrist is also known as a Doctor of Optometry (OD). You may go to an optometrist for eye exams, vision tests, corrective lenses, and diagnosis of eye disease. Optometrists can use medications to treat many diseases and can make recommendations for lifestyle and nutrition modifications to support eye health.

Ophthalmologist

An ophthalmologist is a Medical Doctor (MD) or a Doctor of Osteopathy (DO) specializing in eye care and vision. An ophthalmologist can perform eye exams and vision tests, diagnose and treat eye diseases, and perform surgery.
Retina specialist

A retina specialist is an ophthalmologist who has years of specialized training in treating diseases of the retina. Retina specialists treat a wide range of eye conditions and often work in hospitals and eye clinics. If you have AMD, you may need to see a retina specialist to help manage your condition.

The sooner you visit your eye doctor when you have vision changes, the better. Be sure to see your eye doctor for a dilated eye exam at least once a year.
Disease Detection

How is AMD diagnosed?

Your eye doctor will review your medical and family history and do a complete eye exam to find out if you have AMD. The eye exam may include the following tests:

**Visual acuity test**

This test measures how well you see the letters on an eye chart from a distance.

**Dilated eye exam**

Your doctor puts drops into your eye to dilate (widen) the pupil. He or she can then see in the back of the eye, including the retina, for signs of problems or changes.
Fluorescein angiography
Dye is injected into a vein in your arm. The dye lets your eye doctor see the blood vessels in your eye to check for leaks or changes in the retina.

Optical coherence tomography
This scan shows the layers of the retina and measures retinal thickness. It can help show your eye doctor if fluid is within or under the retina and other signs of AMD.

Fundus photography
This test lets your eye doctor look closely at your retina by taking pictures of the back of the eye.
Take the Amsler Grid test to see if you have signs of wet AMD

The Amsler Grid is a simple eye test that can be used at home to alert you to vision changes that may be signs of wet AMD.\textsuperscript{10}
How to use your Amsler Grid

1. Attach the grid to a flat surface, such as a wall or refrigerator.
2. Stand at arm’s length from the grid.
3. Put your glasses on, if you normally wear glasses.
4. Cover one eye.
5. Focus on the dot at the center of the chart, with the other eye.
6. If any lines appear wavy, distorted, or are missing, take note.
7. Repeat the procedure for the other eye.

Be sure to contact your eye doctor if some of the straight lines in the grid look wavy, distorted, or are missing.
Dry AMD

What is dry AMD?

As a normal part of aging, small yellow deposits called drusen form under the retina.\(^1\) Dry AMD occurs when the drusen increase in size and number and break down the light-sensitive cells in the macula.\(^1\)

AMD usually starts as dry AMD but turns to wet AMD in about 10% of people\(^{11,12}\)

There are no medical treatments for dry AMD\(^1\)
What are the symptoms of dry AMD?

Many people with dry AMD have no symptoms or vision loss. Only a dilated eye exam can detect dry AMD. Your eye doctor may recommend that you get a dilated eye exam at least once a year—especially if you have any risk factors for AMD.

Symptoms of dry AMD may include:

- Needing more light when reading
- Trouble recognizing faces
- Blurriness of printed words
- Trouble adjusting to dim light
Wet AMD

What is wet AMD?

Wet AMD occurs when abnormal blood vessels grow under the macula and leak blood and fluid. This damages and scars the macula.

Wet AMD causes 90% of the severe vision loss from AMD.
Wet AMD Symptoms May Appear Suddenly and Get Worse Quickly

Symptoms of wet AMD may include

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blurriness in the center of vision</td>
<td>1</td>
</tr>
<tr>
<td>Blind spots or patches</td>
<td>14</td>
</tr>
<tr>
<td>Straight lines that look wavy</td>
<td>14</td>
</tr>
<tr>
<td>Colors that look dull or washed out</td>
<td>14</td>
</tr>
</tbody>
</table>

Visit [LookToYourFuture.com](http://LookToYourFuture.com)—your online resource to learn more about wet AMD.
Treatment Options

How is dry AMD treated?¹

There are no medical treatments for dry AMD. However, the National Eye Institute’s Age-Related Eye Disease Studies (AREDS) found that taking a specific high-dose formulation of vitamins and minerals may reduce the risk of advanced dry AMD and vision loss.

If your condition is diagnosed early, you can talk to your doctor to slow down the disease and help keep your vision from getting worse. These steps include:

- Taking the AREDS-recommended vitamin and mineral formulation if appropriate, in accordance with your doctor’s instruction.
- Eating healthy.
- Not smoking.

You should continue getting a dilated eye exam at least once a year.
How is wet AMD treated?\textsuperscript{1,15}  

The goal of treatment for wet AMD is to  
• Slow down the disease  
• Maintain your current vision  
• Restore some of your lost vision  

Treatments include  

**Anti-VEGF drugs**  
Anti-VEGF drugs bind to vascular endothelial growth factor (VEGF, a naturally occurring protein in the body), which can keep blood vessels in the eye from becoming leaky. Anti-VEGF drugs are administered by injection in the eye.  

**Laser therapy**  
Laser photocoagulation, a treatment that has been used for some time to treat wet AMD, uses a beam of light to seal off or destroy leaking vessels.
Lifestyle and Outlook

How can I take part in my eye care?

You can help protect yourself against vision loss by working with your eye care team. Here are some suggestions to get the information you need to take care of yourself and your family:

• During eye care appointments, take notes or get a friend or family member to take notes for you
• Ask your eye care team for printed materials about your condition, and ask where you can go for more information
• Other members of your eye care team, such as nurses, can be good sources of information. Talk to them, too

You are not alone.
Your eye care team can help you manage your eye health and your eye condition. Your loved ones are there to support you, too.
What else can I do to help protect my vision?

Below are some tips to help protect against vision loss:

• Maintain a healthy weight
• Eat a nutritious diet that includes green leafy vegetables, yellow and orange fruit, and fish
• Don’t smoke
• Control blood cholesterol and blood pressure
• Exercise regularly
• Get regular eye exams, and talk to your eye doctor if you notice vision changes

Be sure to use all resources and support available to you. See pages 20-21 for more information and to find low vision support in your community.
Low Vision Support

Where can I get more information?

For more information and resources on AMD, contact the following organizations:

**American Macular Degeneration Foundation**
macular.org  1-888-622-8527

**American Society of Retina Specialists**
asrs.org  1-312-578-8760

**BrightFocus Foundation**
brightfocus.org  1-800-437-2423

**Foundation Fighting Blindness**
blindness.org  1-800-683-5555

**Macular Degeneration Association**
macularhope.org  1-855-962-2852

**Macular Degeneration Partnership**
amd.org  1-888-430-9898

**Macular Degeneration Support**
mdsupport.org  1-888-866-6148

Visit **LookToYourFuture.com** for more tips and information on wet AMD.
Need a ride to and from your eye doctor appointment?

**Rides in Sight*** is a nonprofit service that works to help find local rides. Visit [ridesinsight.org](http://ridesinsight.org) or call 1-855-607-4337.

While Regeneron Pharmaceuticals does provide financial support to patient support organizations, Regeneron does not endorse any specific patient organization. The information provided by Regeneron or these organizations is meant for informational purposes only and is not meant to replace a physician’s medical advice.

*Rides in Sight is not affiliated or related to Regeneron or its products. Regeneron does not influence or control the operations of Rides in Sight and cannot guarantee assistance will be provided. Rides in Sight is not an emergency service. If you have an emergency, call 9-1-1.
Questions to Ask

Some suggested questions to ask your eye doctor

• What is my diagnosis? (Ask your eye doctor to spell any unfamiliar words)
• How might this condition affect my vision?
• Have I already lost any vision?
• When will treatment start?
• What are the benefits of treatment?
• How often do I need to get treatment?
• Is there anything I can do to help protect my vision?
• Are there any low vision services in my area?

Don’t be afraid to ask questions. Your eye care team is there to help you and answer all your questions.
References
