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Macular Degeneration

Also called: Age-related macular degeneration, AMD

Macular degeneration, or age-related macular degeneration (AMD), is a leading cause of vision loss in Americans 60 and older. It is a disease that destroys your sharp, central vision. You need central vision to see objects clearly and to do tasks such as reading and driving.

AMD affects the macula, the part of the eye that allows you to see fine detail. It does not hurt, but it causes cells in the macula to die. There are two types: wet and dry. Wet AMD happens when abnormal blood vessels grow under the macula. These new blood vessels often leak blood and fluid. Wet AMD damages the macula quickly. Blurred vision is a common early symptom. Dry AMD happens when the light-sensitive cells in the macula slowly break down. You gradually lose your central vision. A common early symptom is that straight lines appear crooked.

Regular comprehensive eye exams can detect macular degeneration before the disease causes vision loss. Treatment can slow vision loss. It does not restore vision.

NIH: National Eye Institute

Start Here

- Age-Related Macular Degeneration [<https://www.nei.nih.gov/learn-about-eye-health/eye-conditions-and-diseases/age-related-macular-degeneration>]  (National Eye Institute)
Also in Spanish [<https://www.nei.nih.gov/espanol/aprenda-sobre-la-salud-ocular/enfermedades-y-afecciones-de-los-ojos/degeneracion-macular-relacionada-con-la-edad>]
- What Is Macular Degeneration? [<https://www.aao.org/eye-health/diseases/amd-macular-degeneration>]
(American Academy of Ophthalmology)
Also in Spanish [<https://www.aao.org/salud-ocular/enfermedades/dmre-degeneracion-macular-relacionada-edad>]

Diagnosis and Tests

- Dilating Eye Drops [<https://www.aapos.org/glossary/dilating-eye-drops>]
(American Association for Pediatric Ophthalmology and Strabismus)

Prevention and Risk Factors

- Prevention of Age-Related Macular Degeneration [<https://www.brightfocus.org/resource/prevention-of-age-related-macular-degeneration/>] (BrightFocus Foundation)
Also in Spanish [<https://www.brightfocus.org/resource/factores-de-riesgo-y-prevencion-macular/>]

Treatments and Therapies

- Age-Related Eye Disease Studies (AREDS/AREDS2) [<https://www.nei.nih.gov/research/clinical-trials/age-related-eye-disease-studies-aredsareds2>]  (National Eye Institute)
- Choosing Wisely When It Comes to Eye Care: Antibiotics for Eye Injections [<https://www.aao.org/eye-health/news/choosing-wisely-when-it-comes-to-eye-care-part-4>] (American Academy of Ophthalmology)

Living With

- Diet and Nutrition [<https://www.aao.org/eye-health/tips-prevention/diet-nutrition>] (American Academy of Ophthalmology)
Also in Spanish [<https://www.aao.org/salud-ocular/consejos/dieta-nutricion>]

Specifics

- Dry Macular Degeneration [<https://www.mayoclinic.org/diseases-conditions/dry-macular-degeneration/symptoms-causes/syc-20350375?p=1>] (Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/dry-macular-degeneration/symptoms-causes/syc-20350375?p=1>]
- Wet Macular Degeneration [<https://www.mayoclinic.org/diseases-conditions/wet-macular-degeneration/symptoms-causes/syc-20351107?p=1>] (Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/wet-macular-degeneration/symptoms-causes/syc-20351107?p=1>]

Genetics

- Age-related macular degeneration: MedlinePlus Genetics [<https://medlineplus.gov/genetics/condition/age-related-macular-degeneration>]  (National Library of Medicine)
- Stargardt macular degeneration: MedlinePlus Genetics [<https://medlineplus.gov/genetics/condition/stargardt-macular-degeneration>]  (National Library of Medicine)

Videos and Tutorials

- Macular degeneration [<https://medlineplus.gov/ency/anatomyvideos/000085.htm>]  (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/anatomyvideos/000085.htm>]

Statistics and Research

- Eye Health Data and Statistics [<https://www.nei.nih.gov/learn-about-eye-health/eye-health-data-and-statistics>]  (National Eye Institute)
Also in Spanish [<https://www.nei.nih.gov/espanol/aprenda-sobre-la-salud-ocular/datos-y-estadisticas-relacionadas-con-la-salud-ocular>]

Clinical Trials

- ClinicalTrials.gov: Macular Degeneration [<https://clinicaltrials.gov/search?cond=%22Macular+Degeneration%22&aggFilters=status:not%20rec>]  (National Institutes of Health)

Journal Articles

References and abstracts from MEDLINE/PubMed (National Library of Medicine)

- Article: Endoplasmic reticulum-mitochondria coupling prompts ZBP1-mediated RPE cell PANoptosis in age-related macular... [<https://www.ncbi.nlm.nih.gov/pubmed/40731132>]
- Article: Genetic Factors Associated with Intraocular Inflammation After Brolucizumab Administration in Patients... [<https://www.ncbi.nlm.nih.gov/pubmed/40725453>]
- Article: Combined exposure to three heavy metals and the risk of age-related... [<https://www.ncbi.nlm.nih.gov/pubmed/40707687>]
- Macular Degeneration -- see more articles [<https://pubmed.ncbi.nlm.nih.gov/?term=%22Macular+Degeneration%22%5Bmajr%3Aexp%5D+AND+humans%5Bmh%5D+AND+english%5Bla%5D+AND+%22last+2+Years%22+%5Bdat%5D+NOT+%28letter%5Bpt%5D+OR+case+reports%5Bpt%5D+OR+editorial%5Bpt%5D+OR+comment%5Bpt%5D%29+AND+free+full+text%5Bsb%5D+>]

Reference Desk

- How the Eyes Work [<https://www.nei.nih.gov/learn-about-eye-health/healthy-vision/how-eyes-work>] 
Also in Spanish [<https://www.nei.nih.gov/espanol/aprenda-sobre-la-salud-ocular/vision-saludable/como-funcionan-los-ojos>]

Find an Expert

- American Foundation for the Blind [<https://www.afb.org/>]
- Find an Ophthalmologist [<https://secure.aao.org/aao/find-ophthalmologist>] (American Academy of Ophthalmology)
Also in Spanish [<https://secure.aao.org/aao/encontrar-ofthalmologo>]
- National Eye Institute [<https://www.nei.nih.gov/>] 

Patient Handouts

- Age-related macular degeneration [<https://medlineplus.gov/ency/article/001000.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/001000.htm>]
- Fluorescein angiography [<https://medlineplus.gov/ency/article/003846.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003846.htm>]
- Home vision tests [<https://medlineplus.gov/ency/article/003446.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003446.htm>]
- Intravitreal injection [<https://medlineplus.gov/ency/article/007629.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/007629.htm>]



MEDICAL ENCYCLOPEDIA

- Age-related macular degeneration [<https://medlineplus.gov/ency/article/001000.htm>]
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- Macular degeneration [<https://medlineplus.gov/ency/anatomyvideos/000085.htm>]
- Ophthalmoscopy [<https://medlineplus.gov/ency/article/003881.htm>]
- Slit-lamp exam [<https://medlineplus.gov/ency/article/003880.htm>]
- Standard eye exam [<https://medlineplus.gov/ency/article/003434.htm>]

Related Health Topics

- Eye Diseases [<https://medlineplus.gov/eyediseases.html>]
- Vision Impairment and Blindness [<https://medlineplus.gov/visionimpairmentandblindness.html>]

The primary NIH organization for research on *Macular Degeneration* is the National Eye Institute [<https://nei.nih.gov/>]

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