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LITMUS TEST FOR AMD TREATMENT PLAN

Standard treatment for wet AMD involves routine eye injections. But they may not be necessary for everyone. Doctors aren’t sure how to tell who needs the treatment and who could hold off. But researchers may have discovered a reliable test. In a small study of eye fluid taken from 38 people with wet AMD, researchers found higher levels of a protein called “angiopoietin-like 4” in people who required monthly injections compared to those who could go longer without injections or even stop them altogether. The protein may serve as a measure of who has stable disease and whose disease is progressing.

SOURCE: JCI Insight

HOW’S YOUR HEART?

Wet AMD, like dry, involves two kinds of deposits in the eyes: drusen and subretinal drusenoid deposits. The type of deposits you have may say something about more than just your eye health. In a study of 126 people with AMD, those with the subretinal deposits were very likely to have a history of heart attack or stroke. Those with drusen were not. The findings suggest that people with subretinal drusenoid deposits who don’t already have a history of cardiovascular problems should get checked. They may be at high risk for undetected disease.

SOURCE: Retina

9 in 10

Cases of legal blindness caused by wet AMD.

SOURCE: BrightFocus Foundation
FDA-approved to treat Wet AMD

**EYLEA® HD** (aflibercept) Injection 8 mg

Could significantly improve your vision and help you go up to 4 months between treatments after 3 initial monthly treatments

People on EYLEA HD saw an average of 6+ more letters on an eye chart in a clinical study at 1 year, similar to those on EYLEA® (aflibercept) Injection. After 3 initial monthly treatments, your retina specialist will choose a treatment schedule of every 2 to 4 months. Individual results and dosing may vary.

**IMPORTANT SAFETY INFORMATION**

- EYLEA HD and EYLEA® (aflibercept) Injection are administered by injection into the eye. You should not use EYLEA HD or EYLEA if you have an infection in or around the eye, eye pain or redness, or known allergies to any of the ingredients in EYLEA HD or EYLEA, including aflibercept.
- Injections into the eye with EYLEA HD or EYLEA can result in an infection in the eye, retinal detachment (separation of retina from back of the eye) and, more rarely, serious inflammation of blood vessels in the retina that may include blockage. Call your doctor right away if you experience eye pain or redness, light sensitivity, or a change in vision after an injection.
- In some patients, injections with EYLEA HD or EYLEA may cause a temporary increase in eye pressure within 1 hour of the injection. Sustained increases in eye pressure have been reported with repeated injections, and your doctor may monitor this after each injection.
- There is a potential but rare risk of serious and sometimes fatal side effects, related to blood clots, leading to heart attack or stroke in patients receiving EYLEA HD or EYLEA.
- The most common side effects reported in patients receiving EYLEA HD were cataract, increased redness in the eye, increased pressure in the eye, eye discomfort, pain, or irritation, blurred vision, vitreous (gel-like substance) floaters, vitreous detachment, injury to the outer layer of the eye, and bleeding in the back of the eye.
- The most common side effects reported in patients receiving EYLEA were increased redness in the eye, eye pain, cataract, vitreous detachment, vitreous floaters, moving spots in the field of vision, and increased pressure in the eye.
- You may experience temporary visual changes after an EYLEA HD or EYLEA injection and associated eye exams; do not drive or use machinery until your vision recovers sufficiently.
- For additional safety information, please talk to your doctor and see the full Prescribing Information for EYLEA HD and EYLEA.

**Consider long-lasting EYLEA HD**

In a clinical study of Wet AMD patients at 1 year:

- EYLEA HD provided long-lasting vision improvement. EYLEA HD provided similar vision improvements to EYLEA® (aflibercept) Injection with fewer injections on average.
- 83% of EYLEA HD patients went 3 or 4 months between treatments after 3 initial monthly treatments*
- EYLEA HD may provide noticeable improvements on your retinal imaging that you and your retina specialist can see.
- EYLEA HD and EYLEA share a similar safety profile.

*Combined results from 2 groups of people who received EYLEA HD in a clinical trial every 3 or 4 months.

EYLEA HD was studied in 1009 people with Wet AMD (673 were assigned to EYLEA HD). People assigned to EYLEA HD every 3 or 4 months saw 7 and 6 more letters on average, respectively, on an eye chart vs 8 more letters in those assigned to EYLEA every 2 months. Each group had 3 initial monthly treatments. These are average results at 1 year among these people. Individual results and dosing may vary.

**What could 4 months between treatments mean to you?**

EYLEA HD for vision improvement and the potential for fewer injections

**Ask your retina specialist today about EYLEA HD**

Visit EYLEAHD.com or scan the QR code to learn more

You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch or call 1-800-FDA-1088.

Please see Brief Summary of full Prescribing Information for EYLEA HD and EYLEA on the next page.
This summary contains risk and safety information for patients about
EYLEA HD and EYLEA. It does not include all the information about
EYLEA HD and EYLEA and does not take the place of talking to your eye
doctor about your medical condition or treatment.

What are EYLEA HD and EYLEA?
EYLEA HD and EYLEA are prescription medicines that work by blocking
vascular endothelial growth factor (VEGF). VEGF can cause fluid to leak into
the macula (the light-sensitive tissue at the back of the eye responsible for
sharp central vision). Blocking VEGF helps reduce fluid from leaking into
the macula.

What are EYLEA HD and EYLEA used for?
EYLEA HD is indicated for the treatment of patients with:
• Neovascular (Wet) Age-Related Macular Degeneration (AMD)
• Diabetic Macular Edema (DME)
• Diabetic Retinopathy (DR)
EYLEA is indicated for the treatment of patients with:
• Macular Edema following Retinal Vein Occlusion (RVO)
• Neovascular (Wet) Age-Related Macular Degeneration (AMD)
• Diabetic Macular Edema (DME)
• Diabetic Retinopathy (DR)

How are EYLEA HD and EYLEA given?
EYLEA HD and EYLEA are injections administered by your eye doctor into
the eye. Depending on your condition, EYLEA HD and EYLEA injections
are given on different schedules. Consult with your eye doctor to confirm
which EYLEA HD or EYLEA schedule is appropriate for you.

Who should not use EYLEA HD or EYLEA?
Do not use EYLEA HD or EYLEA if you have an infection in or around the
eye, eye pain or redness, or are allergic to aflibercept and/or any other
ingredients in EYLEA HD or EYLEA.

What is the most important information I should know about
EYLEA HD and EYLEA?
• EYLEA HD and EYLEA must only be administered by a qualified eye
doctor. Injections into the eye with EYLEA HD or EYLEA can result in an
infection in the eye, retinal detachment (separation of retina from back
of the eye) and, more rarely, serious inflammation of blood vessels in
the retina that may include blockage. Call your doctor right away if you
experience eye pain or redness, light sensitivity, or a change in vision,
after an injection
• In some patients, injections with EYLEA HD or EYLEA may cause a
temporary increase in eye pressure within 1 hour of the injection.
Sustained increases in eye pressure have been reported with repeated
injections, and your eye doctor may monitor this after each injection
• There is a potential but rare risk of serious and sometimes fatal side
effects related to blood clots, leading to heart attack or stroke in
patients receiving EYLEA HD or EYLEA
• You may experience temporary visual changes after an EYLEA HD
or EYLEA injection and associated eye exams; do not drive or use
machinery until your vision recovers sufficiently

What are possible side effects of EYLEA HD and EYLEA?
EYLEA HD and EYLEA can cause serious side effects.
• See important safety information listed under
“What is the most important information I should know about
EYLEA HD and EYLEA?”

The most common side effects reported in patients receiving EYLEA HD
include:
• Cataract
• Increased redness in the eye
• Increased pressure in the eye
• Eye discomfort, pain, or irritation
• Blurred vision

The most common side effects reported in patients receiving EYLEA
include:
• Increased redness in the eye
• Eye pain
• Cataract
• Increased pressure in the eye
• Vitreous detachment

There are other possible side effects of EYLEA HD and EYLEA. For more
information, ask your eye doctor.

It is important that you and/or your caregiver contact your
doctor right away if you think you might be experiencing any
side effects, including eye pain or redness, light sensitivity, or
a change in vision, after an injection.

You are encouraged to report negative side effects of prescription
drugs to the FDA.
Visit www.fda.gov/medwatch or call 1-800-FDA-1088.

What should I tell my eye doctor before receiving EYLEA HD or EYLEA?
• Tell your eye doctor if you have any medical conditions
• Tell your eye doctor if you are pregnant or are planning to become
pregnant. It is not known if EYLEA HD or EYLEA may harm your unborn
baby
• Tell your eye doctor if you are breastfeeding. It is not known if
EYLEA HD or EYLEA may harm your baby. You and your eye doctor
should decide whether you should be treated with EYLEA HD or EYLEA,
or breastfeed, but you should not do both

How are EYLEA HD and EYLEA supplied?
EYLEA HD is supplied in a clear to slightly opalescent, colorless to pale
yellow solution. It is provided in a glass vial containing the amount of
product required for a single injection into the eye, which is 0.07 mL of a
114.3 mg/mL solution (or 8 mg of the medicine product).
EYLEA is supplied in a clear, colorless to pale yellow solution. It is provided
in a pre-filled glass syringe or vial containing the amount of product
required for a single injection into the eye, which is 0.05 mL of a 40 mg/mL
solution (or 2 mg of the medicine product).

Where can I learn more about EYLEA HD and EYLEA?
For a more comprehensive review of EYLEA HD and EYLEA safety and risk
information, talk to your health care provider and see the full Prescribing
Information at EYLEAHD.com and EYLEA.com.
STATS & FACTS

By Sonya Collins
Reviewed by Brunilda Nazario, MD, WebMD Chief Physician Editor, Medical Affairs

UP TO 11 MILLION

Estimated number of people in the U.S. who have AMD—either wet or dry.

30%
Amount of risk for developing AMD after age 75.

90%
Amount of AMD-related legal blindness cases caused by the “wet” form.

2%
Amount of risk for developing AMD between ages 50 and 59.

SOURCE: BrightFocus Foundation
MACULAR DEGENERATION AND AGING

WHAT TO EXPECT

By Rachel Reiff Ellis
Reviewed by Brunilda Nazario, MD, WebMD Chief Physician Editor, Medical Affairs

Like the name says, age plays a key role in bringing on age-related macular degeneration (AMD). It happens when aging causes damage to your macula—the part of the eye that controls sharp, straight-ahead vision.

The macula is part of your retina, and has some of the most metabolically active cells in your body.

Over time, wear and tear can lead to the symptoms of the disease. “As the retina is churning out all this energy and turning light into a signal that our brain can use, unfortunately there's going to be breakdown of those components,” says Peter Krall, MD, ophthalmologist at Scripps Clinic in Oceanside, CA.

WHY IT HAPPENS

Macular degeneration is the most common cause of vision loss of people ages 50 and older. Besides age, other factors can raise your risk of it, such as:

• Family history
• Exposure to ultraviolet light
• High-fat diet

Pay attention to these symptoms specific to macular degeneration:

+ Blurry, blank, or distorted spots (instead of general blur)
+ Normal peripheral vision, but problems with front focus
+ Missing details of faces or letters in words
+ Straight lines appearing wavy

WATCH OUT
• Smoking
• High blood pressure

“In the aging eye, it’s the combination of increased exposure to stresses and compromised defense systems that is thought to lead to the development of AMD,” says Akrit Sodhi, MD, PhD, associate professor of ophthalmology at the Johns Hopkins Wilmer Eye Institute in Columbia, MD.

WHAT YOU CAN DO ABOUT IT
Over time you may have trouble with daily activities such as driving and reading, and may need certain tools to help you see. But Krall says catching it early is the key to holding off symptoms.

“There are really effective medications that can reduce the fluid buildup in the retina, and really extend the amount of time that you have your vision,” Krall says.

If you’re in the early stages of AMD, your doctor won’t treat it. Instead, you’ll go in regularly for eye exams to keep tabs on your condition.

The main treatment for wet AMD is a medication called anti-VEGF. You get it through injection into your (numbed) eye. VEGF stands for vascular endothelial growth factor, which helps new blood vessels grow. These new blood vessels cause most of the symptoms of wet AMD. By blocking their growth, you halt the progression of the disease.

Sometimes doctors use a laser treatment called photodynamic therapy (PDT) along with anti-VEGF injections.

Sodhi says these therapies seem to work well for wet AMD and continue to improve.

“With early treatment, most patients with wet AMD maintain good vision,” he says. “Researchers around the world are currently developing new treatments for advanced AMD with the goal of improving upon current treatments for wet AMD and preserving or improving vision in patients with advanced dry AMD.”

LIVING WITH LOW VISION

Peter Krall, MD, offers tips for life with wet AMD.

Get to know your doctor. You’ll be at the doctor’s office quite a bit. But if you stick with it, it really can either improve your vision or keep it from getting worse.

Use vision aids. Magnification is your friend.

Keep a positive outlook. Having AMD doesn’t mean you’ll go blind.
I had dry AMD years ago and was told that it could transition to wet AMD, which is more serious. I was given a grid to post on my refrigerator to monitor my vision. I was told that when the dot got wavy then I should get it checked out. For years there were no issues, but that changed in 2015.

A STORM BREWING
I called the eye center, and their quick response let me know it was serious. They connected me to an amazing retina specialist. The appointment was very emotional. I started crying when I heard my diagnosis. My husband has issues with his eyes and is dyslexic. I handle all the bills and paperwork, so I worried about how we would manage. I’m a retired schoolteacher, but I stay busy with many activities—spending time with my 10-year-old granddaughter, traveling with my husband (of 46 years) in our RV, and reading. How would this all change? My doctor responded with kindness, sharing that her own grandmother had lost her eyesight, so she felt it was her mission to help others maintain their vision.

CLEAR SKIES AHEAD
On this same visit, my doctor said, “We’re going to give you an injection
in your eye.” I was terrified. Fluid was building in my eye, so it had to be done. The procedure went well. She was so kind. For 8 years now, she’s always made me feel comfortable—telling me step by step what she is going to do.

We’ve figured out the timing for my injections—going from every 4 weeks to 12, then back to 10 when fluid started to build up again. No matter what, I don’t miss these appointments! I understand how important it is to keep them.

The techniques have improved over the years. I feel fine afterward.

**RAIN, THEN RAINBOW**

I walk around in complete gratitude. My vision is not perfect, but I’m able to read (a Kindle works best because I can adjust the lighting). I walk my granddaughter to and from school each day and I help her with her homework.

I’ve made some lifestyle changes—adding more green veggies to my diet, protecting my eyes from the sun, and trying supplements for eye health.

I still have anxiety at times. But my treatments, which help stop the progression of vision loss, and personal changes have allowed me to continue life in an active way. I am fortunate, though, because I know that once vision is lost, there is no getting it back—it’s permanent.

When I explain my wet AMD to one of my granddaughters, she says it’s hard to imagine. I explain that as it gets worse, it may be harder to see the center of her face. For now, I still see the beautiful smiles of both of my granddaughters. When things get tough, they are my reminder to hang in there.

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**LIZ’S TIPS**

- Find a retina specialist whom you can trust.
- Keep your injection appointments.
- Continue your eye checks at home. Use the grid, look at horizontal lines, and watch for changes.

After speaking with a retina specialist, people may use the Amsler grid (above) to test for vision problems.
ADJUSTING TO LIFE WITH WET AMD

HOW TO HANDLE THE ROAD AHEAD

By Rachel Reiff Ellis
Reviewed by Brunilda Nazario, MD,
WebMD Chief Physician Editor, Medical Affairs

Although wet AMD is a less common type of macular degeneration, it usually causes quicker vision loss. This means you’ll soon start seeing things differently than you did before.

“Yes, you may struggle with reading or not be able to drive, but you will always retain your peripheral vision as long as you have no other eye problems such as glaucoma,” says Matt R. Starr, MD, an ophthalmologist at the Mayo Clinic in Rochester, MN, and clinical spokesperson for the American Academy of Ophthalmology.

Here are tips for navigating a new normal with limited vision and information about what lies ahead.

EYE INJECTIONS: WHAT TO EXPECT

The most common treatments for wet AMD are anti-VEGF injections in the eye. These injections work against a protein called VEGF. VEGF plays a part in the abnormal blood vessel growth in the macula—the part of your eye responsible for sharp vision—causing wet AMD symptoms. A doctor injects these drugs into your eye. Many people new to this treatment are nervous about having a needle to the eye, but it’s not painful, says Ninel Gregori, MD, an ophthalmologist at the University of Miami Bascom Palmer Eye Institute in Florida and clinical spokesperson for the American Academy of Ophthalmology.

“The eye is easy to numb, and you will not feel anything sharp,” she says.

Your doctor will use a tool to keep your eyelids out of the way, so you don’t accidentally blink during the injection. Then they’ll numb your eye with drops, gel, or a cotton swab. The
needle is tiny, and some people don’t even feel it. You may have soreness after your injection and foggy vision. A wet washcloth and over-the-counter pain medication can help.

**MONITOR EYE HEALTH AT HOME**
Often only one eye has wet AMD, but the second eye may become affected. Take stock of your vision regularly so you can tell if symptoms are developing.

“If you notice any changes in the second eye, you should see your ophthalmologist right away,” Gregori says. To protect the second eye, your ophthalmologist will recommend AREDS vitamins.

“The sooner the treatment starts, the better overall vision prognosis is,” she says.

**SEE A LOW-VISION THERAPIST**
Losing your central vision will mean learning new ways of doing things. Your doctor can recommend rehabilitation resources who can give you personalized guidance.

“The best advice I give patients is to work with a low-vision specialist who will help them with reading aids, magnifiers, specific lighting, and other new devices or aids which help navigate their homes, write checks, or perform other routine household tasks,” Starr says.

A low-vision specialist can also help you recognize and strengthen your other senses. You can learn to tune in more closely to what you hear and touch to help you navigate daily tasks. You’ll also practice using your peripheral vision.

**KEEP UP WITH CHECKUPS**
An important part of preserving vision and preventing complications is regular visits to your eye doctor. Timely treatment can significantly reduce or delay vision loss, Gregori says.

“I encourage patients to be compliant with their eye visits to avoid missing their scheduled eye injections and hopefully to keep vision for many, many years,” she says.

**LOW-VISION AIDS**
Ninel Gregori, MD, shares some gadgets and workarounds.

+ Magnifying devices
+ Voice commands
+ Large-print books
+ Audiobooks
+ High-contrast household items
+ Tactile or textured labels
+ Brighter lighting in your home
The vision in my left eye was always a little better than the vision in my right. But in April 2020, when I was 59, I suddenly noticed that the vision in my right eye was a lot worse. I went to my optometrist for an eye exam. He thought I might have a detached retina and referred me to an ophthalmologist. It was the ophthalmologist who diagnosed me with wet macular degeneration. He started me on eye injections that day. I’d heard of macular degeneration but never “wet” macular degeneration. I learned everything I could about it and about lifestyle changes and technology that might help me.

The vision in my right eye improved after starting the injections. But
I was a surgical assistant in the operating room. But it got to a point that I had to lean almost completely over the wound, even with bifocals, to do the sutures. It broke my heart, but I had to retire.

When my wife and I moved to Las Vegas to be closer to our son, daughter-in-law, and grandchildren, my new doctor said it was time to switch me to a new medicine because we weren’t getting the most out of the other one. He said, “There’s no reason for us not to do the best we can.”

He says he’s seeing improvement in the fluid in my eyes. If we can just keep it from getting worse, I’ll count myself as blessed.

How well I see depends on the light. I have a little dog, and I know he’s with me, but sometimes I can’t see him. Sometimes I can’t make out my own face in the mirror. I just see a person there, but to see any detail, I have to get very close.

Technology helps me. The text on my phone is blown up as large as it will go. I also use speech-to-text. On social media, I can click a button and it will read me anything that I can’t see.

Social media has helped so much. I’m in a Facebook group for macular degeneration. Sometimes just knowing that other people are going through the same thing can make you feel better.
While there’s not a cure for wet age-related macular degeneration (AMD), a treatment plan that includes medicine and a healthy lifestyle can slow the progress of the disease. “There’s a genetic component to macular degeneration, but lifestyle can also have an influence on disease progression, which can affect vision and quality of life for our patients,” says Purnima S. Patel, MD, an ophthalmologist at Ophthalmology & Retina Associates of Georgia.

Your healthy habits could help slow down the disease or, if you have wet AMD in only one eye, you may be able to prevent it from developing in the other eye.

STOP SMOKING
If you smoke, make a quit plan with your doctor today. Smoking increases the risk of both developing macular degeneration and of disease progression.

STAY ACTIVE
Regular physical activity could help slow the progress of your wet AMD. “It increases oxygen levels in the eyes and improves some of the cardiovascular risk factors associated with the disease,” Patel says.

EAT RIGHT
Harmful substances called oxidants may speed up the progress of AMD. Antioxidants, found in colorful fruits and vegetables, can blunt this negative effect. “I tell patients to eat the rainbow,” Patel says. “Leafy greens and fruits and vegetables of a variety of colors all contain antioxidants.”

Omega-3 fatty acids might also slow the progress of advanced, or wet, AMD. You can find omega-3s in fatty fish, like salmon or mackerel. Go for three servings a week.

Antioxidant-rich foods might slow wet AMD progression. Add these to your plate:

- Broccoli
- Avocado
- Chickpeas
- Berries
- Tangerines
- Sweet potatoes