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Health

(<https://www.hopkinsmedicine.org/health>) Photodynamic Therapy for Age-Related Macular Degeneration

📌 Eyes (<https://www.hopkinsmedicine.org/health/eyes>)

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What is photodynamic therapy for age-related macular degeneration?

Photodynamic therapy is a treatment for the eyes. It uses a laser and a special medicine that works when exposed to a certain type of light. It is done to treat age-related macular degeneration (AMD). AMD is a condition that can lead to loss of vision.

The retina is the layer of cells in the back of your eye that converts light into electrical signals. Your retina then sends these signals to your brain. AMD affects your macula. The macula is the sensitive, central part of your retina. This area is responsible for your detailed, central vision. AMD damages your macula. The macula may become thinner as a result. Blood vessels may start growing beneath your retina. This can cause fluid to leak beneath your macula. This excess fluid can lead to vision loss.

Just before the procedure, an eye doctor injects a medicine into a vein in your arm. This medicine is sensitive to light. It collects in the abnormal blood vessels under your macula. You are then given an anesthetic eye drop. Using a special contact lens, the eye doctor then shines a laser into your eye. The light from the laser activates the medicine. The medicine then creates blood clots in your abnormal blood vessels. This seals off the vessels. This can help prevent more vision loss.

Mylan v. Regeneron, IPR2021-00881
U.S. Pat. 9,254,338, Exhibit 2204

Why might I need photodynamic therapy for age-related macular

Photodynamic therapy is one type of treatment for AMD. AMD is a common cause of significant loss of eyesight in older adults. Rarely, it can lead to total blindness. Because it affects your macula, you may still have your side (peripheral) vision if you have AMD. It may cause a sudden or gradual loss of your central vision.

AMD comes in two main subtypes: dry type and wet type. Abnormal blood vessel growth is present in only the wet type. Photodynamic therapy is recommended only as a possible therapy for the wet type of the disease.

Photodynamic therapy can't restore vision that you have already lost. But it may slow down the damage to your central vision.

Photodynamic therapy is an option only for certain people with wet type AMD. It may be advised if your vision loss comes on slowly over time, instead of suddenly. The treatment is used less often now that there are new drugs to decrease abnormal blood vessel growth. But your healthcare provider may advise the therapy in addition to these new drugs.

What are the risks of photodynamic therapy for age-related macular degeneration?

All procedures have risks. The risks of this procedure include:

- A new blind spot
- Back pain related to injection of the medicine
- Photosensitivity reactions like sunburn, if exposed to direct sunlight right after the procedure
- Reactions where you had the light-activated medicine injected
- Temporary loss of visual sharpness which rarely is severe

Your risks may differ according to your age, other medical problems, and the specific anatomy of your AMD. Ask your eye doctor about your risks for the procedure.

The effects of the therapy are often short-term. This is because the abnormal blood vessels may open up again.

How do I prepare for photodynamic therapy for age-related macular degeneration?

Ask your eye doctor what you need to do to prepare for photodynamic therapy. Ask whether you need to stop taking any medicines before the procedure. Also ask when you need to stop eating and drinking before the procedure.

Your eye doctor may want to use special instruments to shine a light in your eye and examine the back of your eye. You may need to have your eyes dilated for this eye exam. Your eye doctor might order other special tests to get even more information about your eye.

Before the procedure, eye drops will be used to dilate your pupil. It will stay dilated for several hours after the procedure.

What happens during photodynamic therapy for age-related macular degeneration?

It is most often done as an outpatient procedure in an eye doctor's office or eye clinic. During a typical procedure:

- You will be given an injection of the light-sensitive medicine.
- You will be awake during the procedure. You may receive a medicine to help you relax.
- You will be given anesthetic eye drops to make sure you don't feel anything.
- You will have a special contact lens placed on your eye. This helps the laser focus on exactly the right spot on the back of your eye.
- Your eye doctor will shine the laser in the exact spot in your eye. This will activate the light-sensitive medicine and cause it to form blood clots in the abnormal vessels below your macula. This seals off the abnormal blood vessels.
- Your eye may be covered temporarily.

What happens after photodynamic therapy for age-related macular degeneration?

Ask your eye doctor about what you should expect after your procedure. You should be able to go home the same day. Plan to have someone go home with you after the procedure.

For a few days after the procedure, your eyes and skin will be more sensitive to light. This is due to the light-sensitive medicine. During this time, you will need to stay indoors and avoid direct sunlight. If you must go outside, use dark glasses and protective clothing. Ask your eye doctor when it is safe for you go outside again.

Your eye may be a little sore after the procedure. Talk with your eye doctor about taking over-the-counter pain medicine. Be sure to follow your eye doctor's orders about eye care and medicines.

You will need close follow-up care with your eye doctor. He or she will monitor you for complications and continue to manage your treatment for AMD. Tell your eye doctor right away if you have decreased vision or increased eye redness, swelling, or pain. Your vision may be blurry for a short while after the procedure, but this often goes away.

Next steps

Before you agree to the test or the procedure make sure you know:

- The name of the test or procedure
- The reason you are having the test or procedure
- What results to expect and what they mean
- The risks and benefits of the test or procedure
- What the possible side effects or complications are
- When and where you are to have the test or procedure
- Who will do the test or procedure and what that person's qualifications are
- What would happen if you did not have the test or procedure
- Any alternative tests or procedures to think about
- When and how will you get the results
- Who to call after the test or procedure if you have questions or problems
- How much will you have to pay for the test or procedure

Request an Appointment

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[Low Vision: What You Need to Know as You Age](https://www.hopkinsmedicine.org/health/wellness-and-prevention/low-vision-what-you-need-to-know-as-you-age)

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[Best Way to Age-Proof Your Vision](https://www.hopkinsmedicine.org/health/wellness-and-prevention/best-way-to-age-proof-your-vision)

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