

How AI and I-SCREEN are helping



Early detection is vital for preserving sight in AMD, especially as treatments are most effective when started early. This is where AI (artificial intelligence) and the I-SCREEN project come in.

I-SCREEN IS DEVELOPING CUTTING-EDGE AI TOOLS THAT CAN:

- Analyse high-resolution images of the retina
- Spot early signs of AMD before symptoms appear
- Predict a person's risk of developing advanced forms of AMD
- Help ophthalmologists personalise treatment plans

By combining expert care by eye care professionals and AI technology, I-SCREEN aims to make eye screening faster, more accurate, and more widely available, especially for those at highest risk.

About I-SCREEN

I-SCREEN is funded by the EU's Horizon Europe programme under the EIC Pathfinder Open call (GA No 101130093), which supports groundbreaking innovations in deep-tech fields. These calls back bold, high-risk research that tackles major global issues and encourages interdisciplinary collaboration and pioneering solutions. As part of this call, the European Council of Optometry and Optics (ECOO), running the community screening activities for the project, has received its funding from the Swiss State Secretariat for Education Research and Innovation (SERI).



For more information about the I-SCREEN project,
visit i-screen.eu



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Protecting Your Sight: Understanding Age-Related Macular Degeneration (AMD)

EARLY SCREENING AND INNOVATION WITH I-SCREEN



What Is Age-Related Macular Degeneration (AMD)?

AMD is a leading cause of blindness, affecting around 200 million people globally. AMD occurs in two forms, known as dry AMD and wet AMD. It mostly affects people over 50 and damages the macula, which is the part at the back of your eye responsible for sharp, central vision, helping you see detail, colour, and objects straight ahead.



How Does AMD Affect Your Vision? YOU MAY NOTICE:

- Blurred or fuzzy vision (even while wearing spectacles or contact lenses)
- A smudge or blind spot in your central vision
- Straight lines appearing wavy or distorted
- Trouble adjusting to bright light or moving from dark to light areas
- Colours looking dull or faded

What Causes AMD?

AMD is a complex condition influenced by genetics, lifestyle and environment. As people get older, their risk of developing AMD increases. Although the cause is not fully understood, several risk factors are known:

YOU'RE MORE AT RISK IF YOU

- Smoke
- Are overweight
- Have high blood pressure
- Eat a diet high in saturated fats
- Are frequently exposed to UV light

The Different Stages of AMD

AMD PROGRESSES IN STAGES:

Early & Intermediate AMD: Vision loss is painless and may only affect one eye in the early stages of the condition, which is why regular eye examinations are important for detecting early retinal changes. **Late AMD:** This stage can lead to more obvious problems with central vision, making it harder to read, recognise faces or carry out everyday tasks. Although there are different types of late AMD, both can result in significant central vision loss, so monitoring and prompt assessment are essential.

Can AMD Be Treated?

- **WET AMD:** If caught early, wet AMD can often be treated. The usual treatment is an injection into the eye to shrink abnormal blood vessels. This may need to be repeated every few weeks.
- **DRY AMD:** Currently, there is no treatment for dry AMD, but affected patients typically retain some vision. For activities such as reading, they can often be helped by good lighting, high-contrast text (such as black on white), and various types of magnifiers.

Your First Point of Contact: Primary Eye Care Providers



Optometrists and other primary eye care professionals are often the first people to spot signs of AMD.

THEY:

- Carry out regular eye tests and retinal imaging
- Detect early changes that may not yet affect your vision
- Provide advice on eye health and risk factors
- Refer you promptly to an ophthalmologist

Having a regular eye check is the best way to catch AMD early, even before symptoms start.