

Smoking and sight loss

The evidence linking smoking to sight loss.

This leaflet is available on audio CD.

**You don't have to face macular disease alone.
For the best information and support call us on
0300 3030 111.**

Age-related macular degeneration (AMD) is the biggest cause of sight loss in the UK. More than half of people who are visually impaired in the UK have lost their sight as a result of AMD. The earlier we give up smoking the better, but it is never too late to stop. Even if you already have AMD, it will progress faster if you continue to smoke.

The evidence

Research consistently shows that smoking increases the risk of developing AMD. Current smokers are up to four times more likely to have

AMD than people who have never smoked. Smokers are more likely to develop AMD up to 10 years earlier than those who have never smoked. Their AMD is likely to progress faster and be less responsive to treatment. Second hand smoke is also likely to increase the risk of AMD.

Smoking and genetics

People who are most in danger of getting AMD are people who smoke and who also have particular genes. For example, research suggests that smokers who have mutations

to the HTRA1 gene are 20 times more likely to get AMD than non-smokers. It is estimated that as much as one third of all AMD is a result of the combination of genetics and smoking.

How does smoking affect the eye?

Many of the 4,500 chemicals in tobacco smoke are extremely toxic. For example, smoke contains arsenic, formaldehyde and ammonia. These chemicals are transported to the delicate tissues of the eye through the bloodstream, where

they damage the structure of the cells. The tar in cigarette smoke is likely to contribute to the formation of 'drusen'. These fatty deposits in the retina are the early signs of AMD.

Inhaling cigarette smoke speeds up the ageing process by increasing the activity of 'free radicals'. These are damaging oxygen-derived molecules, or



oxidants, which reduce the body's ability to regenerate cells. The action of free radicals is called 'oxidative stress' and is a major theory of why we age. In many areas of health we are advised to eat a diet high in antioxidants to help off-set the action of free radicals and this is true in eye health as well. Lutein and zeaxanthin are substances found in high concentrations in the macula and are thought to protect it from ultraviolet light.

Smoking reduces the effectiveness of antioxidants and may

deplete the levels of lutein in the macula. People with lower levels of lutein may be more likely to get AMD. Cigarette smoke also reduces the amount of oxygen reaching the choroid. This is a network of tiny blood vessels that supply the retina. Smoking also damages blood vessels themselves, for example the large blood vessels in the heart as well as the tiny ones in the eye.

E-cigarettes

It is best to quit smoking altogether but if you cannot, even with the support of stop smoking

aids, e-cigarettes may be safer than cigarettes. However there is on going research in this area to determine the long term health impact of e-cigarettes.

What do the experts say about smoking and AMD?

“There is substantial evidence that smoking causes age-related macular degeneration.”

British Medical Association.

“Although smoking is associated with several eye diseases, including nuclear cataract and thyroid eye disease, the

most common cause of smoking related blindness is age-related macular degeneration, which results in severe irreversible loss of central vision.”

Simon Kelly FRCOphth, Consultant Ophthalmologist.

“Smoking prevention in school children and adults is the most effective way to reduce AMD and devastating visual loss.”

Phillip Moradi, Consultant Ophthalmologist, Research Fellow, University College London.

“Many smokers are unaware of the link between tobacco smoking and blindness. The most common form of blindness caused by smoking is age-related macular degeneration.”
Australian Government.

Benefits of stopping

- Your health – improve your health from the moment you stop.
- Your family – passive smoking harms your family.
- Your wallet – the average smoker spends £2,000 a year on cigarettes.

Help to quit smoking

Contact your GP surgery who will be happy to advise you or visit [nhs.uk/smokefree](https://www.nhs.uk/smokefree)

Beating Macular Disease

Macular disease is the biggest cause of sight loss in the UK, with around 200 people diagnosed every day.

The Macular Society is the only charity determined to beat the fear and isolation of macular disease with world-class research, and the best advice and support.

The Advice and Information Service (0300 3030 111) is available Monday to Friday, 9am to 5pm. Alternatively, you can email help@macularsociety.org

Our **website** provides a wide range of information and resources for people affected by macular disease. You can also find out more about the services we offer.

Visit it at macularsociety.org

Our network of over **400 Macular Society Support Groups** stretches across the UK. Each one offers practical

and emotional support for people with macular disease, from those living with it today. Find your local group at macularsociety.org/groups

We provide a free, confidential **Counselling Service** over the phone. Call the Advice and Information Service for more information.

Working with you to Beat Macular Disease:

- We provide the best advice and information on living with macular disease.
- Macular Society Support Groups can help you to beat the isolation of macular disease, by connecting you with other local people who know what you're going through – offering support and companionship.
- Our research programme is focused on finding new treatments and a cure to Beat Macular Disease forever.

Macular Society

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