

# Smoking and sight loss

**Support throughout central vision loss**

The evidence linking smoking to sight loss

**Information and support for anyone affected by macular degeneration. Call 0300 3030 111.**

Age-related macular degeneration (AMD) is the most common cause of sight loss. 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 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

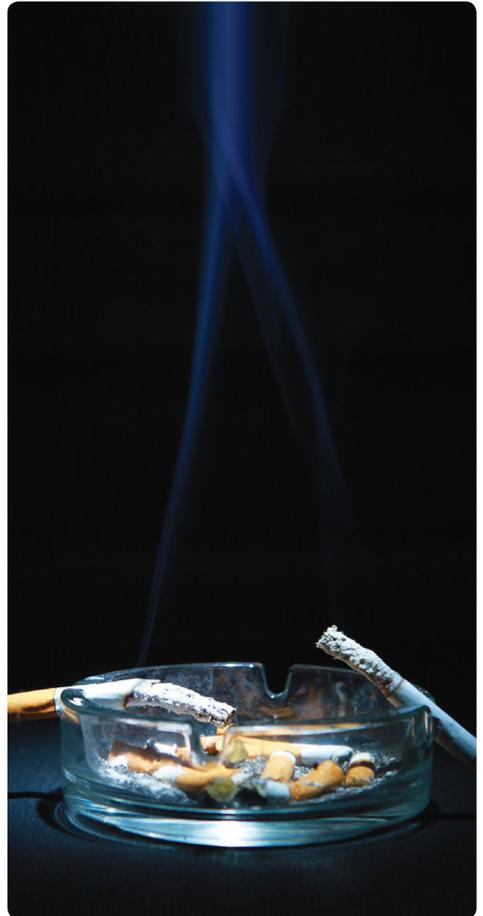
People who are most in danger of getting AMD are people who smoke and who also have particular genes. For example, research suggests that smokers who have mutations to the HTRA1 gene are 20 times more

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 are probably safer than 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 see the following:

**NHS Smoke Free**

[www.nhs.uk/smokefree](http://www.nhs.uk/smokefree)

[www.quit.org.uk](http://www.quit.org.uk)

## How we help

We are the national charity for anyone affected by central vision loss. We provide free information and support to improve lives today. We fund research to overcome macular disease. All our services

are free to those with macular conditions, their family and friends.

**Make our helpline your first point of contact for your questions about macular disease.**

**0300 3030 111**

**Monday to Friday  
9am – 5pm**

**help@macularsociety.org**

**www.macularsociety.org**

As well as the helpline, our services include:

**Counselling** – confidential telephone

support from a professional counsellor.

**Support groups** – we have over 300 local groups around the UK.

**Telephone befrienders** – particularly helpful for those who find it hard to get out and about.

**Gadget Guides** – tips on using gadgets and technology to help people adapt to living with sight loss.

**Skills for Seeing** – training to help people make best use of remaining sight.

## **Six months free membership**

If you would like to receive regular updates about living with macular conditions, treatments and medical research to find a cure then membership is for you.

Join for free today by calling 01264 350 551 or go to [www.macularsociety.org/6months](http://www.macularsociety.org/6months)

We rely on donations to fund support services and medical research. If you would like to donate please go to [www.macularsociety.org/donate](http://www.macularsociety.org/donate) or call 01264 350551.



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Registered Charity Nos 1001198, SC042015 Scotland, 1123 Isle of Man.

Macular Society is the trading name of the Macular Disease Society.

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