

# Antioxidants do not prevent degenerative eye disease

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A diet rich in antioxidant vitamins and minerals does not seem to prevent the degenerative eye disease known as age related macular degeneration, finds a study published on [bmj.com](http://bmj.com) today.

Age related macular degeneration is the leading cause of visual loss in older people. It is caused by the progressive break down of light sensitive cells in the macula, located in the centre of the retina at the back of the eye. Sufferers do not go blind, but find it virtually impossible to read, drive, or do tasks requiring fine, sharp, central vision.

Risk increases with age and smokers are thought to be more susceptible.

Antioxidants (such as vitamin C, vitamin E, various types of carotenoids, and zinc) are thought to reduce oxidative damage to the retina. But the evidence to support the role of dietary antioxidants in preventing macular degeneration remains unclear.

So researchers at the Centre for Eye Research Australia, the University of Melbourne analysed the evidence to examine the role of dietary antioxidants or dietary supplements in the primary prevention of age related macular degeneration.

They identified 11 studies (seven prospective studies and three randomised controlled trials) involving 149,203 people. A range of common dietary antioxidants were investigated and all the studies were carried out amongst well nourished Western populations with an average

follow-up period of nine years.

Importantly, all the studies adjusted for age and smoking in their analyses.

The antioxidants investigated differed across studies, but when results were pooled they showed that vitamin A, vitamin C, vitamin E, zinc, lutein, zeaxanthin,  $\alpha$ -carotene,  $\beta$ -carotene,  $\beta$ -cryptoxanthin and lycopene have little or no effect in the primary prevention of early age-related macular degeneration.

None of the three trials found antioxidant supplements to be protective in the primary prevention of early age related macular degeneration.

Despite some study limitations, the authors conclude that there is insufficient evidence to support the role of dietary antioxidants, including the use of dietary antioxidant supplements, for the primary prevention of early age-related macular degeneration.

Currently, cigarette smoking remains the only widely accepted modifiable risk factor for the primary prevention of early age-related macular degeneration, and patients seeking advice on this condition should be encouraged to quit, they add.

An accompanying editorial by Jennifer Evans at the International Centre for Eye Health supports these findings and says that reducing the prevalence of smoking is probably the most effective method of reducing the population burden of this common cause of visual loss in older people.

Source: British Medical Journal

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