

# Fatty food could cause blindness, warns uni study

**Chris Yandell**



RESEARCHERS at Southampton University are warning that a high-fat diet can increase the risk of blindness in later life.

A study led by Dr Arjuna Ratnayaka has shown that retinal pigment epithelial (RPE) cells in the eye can suffer damage as a result of poor nutrition.

Researchers studied the potential link between fatty cholesterol-laden food and diseases such as age-related macular degeneration (AMD),

AMD is an irreversible disease caused by genetics and external factors such as smoking, high blood pressure and weight gain.

It affects the central vision and is a leading cause of sight loss in the UK, affecting more than 600,000 people.

A university spokesman said: "How an unhealthy diet could increase the likelihood of eye disease is still poorly understood. Scientists therefore analysed how disease-causing pathways triggered

by poor nutrition could impact RPE cells.

"Damage to RPE cells occurs at the onset of AMD, making them less equipped to support

the eye's photoreceptors - the cells in the retina which respond to light.

"The death of photoreceptors leads to permanent sight-loss."

The study determined how the by-products created by the daily activities of photoreceptors were broken down by healthy RPE cells.

"Scientists found healthy RPE cells had a considerable degree of flexibility to cope with changing conditions

in the ageing eye, whereas a high fat diet can disrupt the breakdown process, causing long-term damage and subsequently sight-loss," said the spokesman.

Dr Ratnayaka is a lecturer in vision sciences at the university.

He said: "The effects of poor nutrition in eye health has been studied in large populations but how this actually brings about disease-causing changes in retinal cells is less well understood.

"Our results showed how the waste disposal system of the RPE becomes damaged by unhealthy diet-driven disease pathways.

"Our next step is to find out whether this type of damage can be reversed through better nutrition and if stressed or damaged RPE cells can possibly be rescued.

"Potential new therapies developed along these lines could offer new treatments for some AMD patients."

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**Dr Arjuna Ratnayaka, who led the study**





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