

# Eating disorder anorexia nervosa causes potentially serious eye damage

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The eating disorder anorexia nervosa causes potentially serious eye damage, suggests a small study published online in the *British Journal of Ophthalmology*.

In developed countries, [anorexia nervosa](#) affects up to 3% of affluent women. Although the condition also increasingly affects men, around 10 women will be affected for every one man.

Anorexia nervosa is the third most common chronic disease among teenage women, up to one in 10 of whom will die from it.

Researchers analysed the thickness of the macula and its electrical activity in both eyes of 13 women with anorexia nervosa and in 20 healthy women of the same age.

The average age of the women was 28. Those with anorexia had had their condition for an average of 10 years.

The macula lies near the centre of the [retina](#) at the back of the eye and is responsible for fine detailed central vision and the processing of light.

The tests to determine how well the eyes picked up fine detail, central vision, and colour showed that there were no obvious visual problems and that the eyes were working normally in both sets of women.

But the analysis showed that the macula and the nerve layers feeding it

(retinal nerve fibre layer) were significantly thinner in the eyes of the women with anorexia nervosa

There was also significantly less firing of the [neurotransmitter dopamine](#) (electrical activity) in the eyes of the women with anorexia nervosa. Dopamine neurotransmission is a key element of the brain's ability to process visual images.

There even seemed to be differences between women with different patterns of anorexia.

The fovea - a small pit more or less at the centre of the macula that is rich in light sensitive cone cells (photoreceptors) - was thinner in those women who binged and purged than in those who simply severely restricted their calorie intake.

The authors conclude that it is not yet clear whether macular thinning and decreased neurotransmitter activity are the initial stages of progressive blindness or whether these signs will revert back to normal once normal eating patterns are resumed.

Provided by British Medical Journal

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