

Why Popeye only has eyes for spinach

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Eating spinach could protect your eyes from the leading cause of blindness in western society, say experts at The University of Manchester.

With the aid of a new eye instrument, they have launched a study to see if the vegetable that endows Popeye with his super-human strength could also explain why the 77-year-old sailor has no need for spectacles!

Spinach and some other vegetables like sweetcorn, kale and broccoli are rich in a chemical called lutein, which, together with another carotenoid, zeaxanthin, form an oily, yellow substance at a central point of the retina known as the macula.

This yellow oil, called macular pigment, is thought to protect the macula from age-related macular degeneration or AMD, a disease that studies in the UK have shown to affect up to 12% of men and 29% of women over the age of 75.

"The macula is a small area of the retina responsible for seeing detail and colour in our central field of vision," said Dr Ian Murray, who is leading the research in Manchester's Faculty of Life Sciences.

"Our work has already found strong evidence to suggest that macular pigment provides some protection against AMD but we want to discover whether eating vegetables rich in these chemicals will have a direct impact on the disease.

"Since macular pigment is wholly derived from our diet we would expect that eating foods containing high levels of these compounds increases macular pigment and so helps slow the degenerative process. This latest study on volunteers with early-stage AMD will test that idea."

Scientists do not yet understand why some people are susceptible to age-related macular degeneration but warn the incidence is likely to rise as the population ages.

In collaboration with Tinsley Ophthalmic Instruments, Dr Murray's lab has developed a lightweight instrument that can measure the levels of lutein and zeaxanthin and provide an indication as to whether low levels of macular pigment may be linked with premature visual impairment.

"If the instrument demonstrates that the patient has low levels of macular pigment then they can be advised to take a lutein or zeaxanthin supplement and encouraged to eat vegetables high in these carotenoids.

"AMD is a devastating disease where sufferers slowly lose central vision making reading and most day-to-day activities virtually impossible. The main risk factors for the disease are age and heritance but it is also linked to controllable factors such as poor diet, smoking and obesity.

"Having their macular pigment measured and learning about the health of their eyes might be the first step to a change in lifestyle for many people."

Source: University of Manchester

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