

## **An egg a day could keep AMD at bay**

By staff reporter

26/09/2006- **Making the point of getting a daily egg, the yolk of which is a rich source of lutein and zeaxanthin, could reduce the risk of developing age-related macular degeneration (AMD), suggest two new studies from the University of Massachusetts.**

The new studies, both published in the October issue of the *Journal of Nutrition*, suggest that as well as filling you up for longer (eggs are well known to have a 50 per cent higher satiety index than regular breakfast cereals), an egg a day could boost blood levels of the carotenoids lutein and zeaxanthin, and reduce the risk of AMD.

AMD affects the central part of the retina called the macula, which controls fine vision, leaving sufferers with only limited sight. AMD affects over 10 million people in the United States, with a further 15 to 20 million worldwide, and is the leading cause of blindness in people over 50.

In the first study (Vol. 136, pp. 2519-2524), Elizabeth Goodrow and co-workers investigated the effects on eating one egg every day on serum lutein and zeaxanthin concentrations in 33 men and women over the age of 60 in a randomized cross-over design.

The volunteers were fed one egg or an egg substitute for five weeks before crossing over to the other intervention. Washout periods and a run-in period of no eggs separated the interventions. After five weeks of the one egg per day intervention, serum lutein and zeaxanthin had increased by 26 and 38 per cent, respectively, compared to no-egg run-in.

Importantly, serum concentrations of total cholesterol, LDL cholesterol, HDL cholesterol, and triglycerides were not affected by the egg interventions.

*"These findings indicate that in older adults, 5 wk of consuming 1 egg/d significantly increases serum lutein and zeaxanthin concentrations without elevating serum lipids and lipoprotein cholesterol concentrations,"* concluded the researchers.

The second study (Vol. 136, pp. 2568-2573), Adam Wenzel and co-workers looked at the effect of a 12-week egg intervention on serum lutein and zeaxanthin levels, and the so-called macular pigment optical density (MOPD) in 24 women aged between 24 and 59.

The women were randomly assigned to eat six eggs every week containing about 330 micrograms (Egg1) or about 965 micrograms (Egg2) of lutein and zeaxanthin per yolk, or a placebo (one sugar filled capsule).

Again no changes in serum cholesterol levels was observed in the egg intervention groups, but total cholesterol and triglyceride increases were recorded in the placebo group.

Unlike the other study, only serum zeaxanthin, but not lutein, increased in both Egg1 and Egg2 groups, while MPOD increased in both egg intervention groups, a result that suggests the egg diet offers an alternative method of protecting against potential AMD.

*"Although the aggregate concentration of carotenoid in one egg yolk may be modest relative to other sources, such as spinach, their bioavailability to the retina appears to be high," wrote Wenzel.*

*"Increasing egg consumption to six eggs per week may be an effective method to increase MPOD."*