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AN EGG A DAY HELPS PROMOTE EYE HEALTH
*Eggs Provide Two Antioxidants that Help Prevent
the Leading Cause of Age-Related Blindness*

Park Ridge, Ill. (Sept 21, 2006) – Two randomized clinical studies published this week in the *Journal of Nutrition* found that eating an egg daily helps to promote eye health without raising cholesterol levels. Eggs provide two powerful antioxidants that have been shown to protect the retina and reduce the risk of cataracts and age-related macular degeneration (AMD), the leading cause of age-related blindness. AMD affects more than 13 million Americans or 5 percent of people ages 65 and older.

Both studies looked at the antioxidants lutein and zeaxanthin, which are part of the carotenoid family (like beta-carotene in carrots) and are the only carotenoids found in the eye. People can't make these antioxidants on their own and must get them from foods such as egg yolks, fruits and green-leafy vegetables. Previous research has shown that the lutein in eggs may be better absorbed by the body than it is from other sources such as dietary supplements or spinach.¹

“The two studies published this week on lutein and zeaxanthin provide further validation that eggs provide important eye health benefits for baby boomers and aging adults,” said Donald J. McNamara, Ph.D., executive director of the Egg Nutrition Center. “They also support the 30 plus years of research that show people can enjoy an egg or two a day without negatively impacting blood cholesterol levels, something that has been misunderstood by both health professionals and the public.”

What the Science Says

In one of the studies published in the *Journal of Nutrition*, 24 women ages 24 to 59 were randomly assigned to one of three groups: a group that consumed a sugar pill daily or one of two egg groups.² Women in both egg groups ate six eggs a week for six weeks. The eggs contained either 330 micrograms (EGG 1) or 960 micrograms (EGG 2) of lutein and zeaxanthin.

Zeaxanthin levels significantly increased for both egg groups and lutein levels increased for the women in the EGG 1 group. What's more, the eye pigments that help protect the retina by blocking out

¹ Chung HK, et al. Lutein bioavailability is higher from lutein-enriched eggs than from supplements and spinach in men. *J Nutr.* 2004; 134:1887-1893.

² Wenzel AJ, et al. A twelve week egg intervention increases serum zeaxanthin and macular pigment optical density in women. *J Nutr.* 2006; 136: 2568-2573.

harmful light significantly increased in both egg groups. Interestingly, cholesterol levels significantly increased in the group that consumed the sugar pill but did *not* increase in either egg group.

The other randomized control trial published this week provided further support that eating an egg a day significantly increases lutein and zeaxanthin levels without raising cholesterol levels.³ Thirty-three men and women over the age of 60 participated in each phase of this four-phase study. Lutein and zeaxanthin levels increased by 26 percent and 38 percent, respectively, after participants ate an egg a day for five weeks. There was no increase in levels of these nutrients during a five-week period when participants ate egg substitutes (which lack the antioxidants) daily, nor during two three-week periods when no eggs or egg substitutes were consumed. Cholesterol levels did not differ during any phase of the study.

“Many people think they are doing themselves a favor by only consuming egg substitutes or egg whites,” said Marcia Greenblum, a registered dietitian. “But the fact is, many of an egg’s nutrients are found in the yolk including most of the choline and vitamin B12, and about 40 percent of the protein.”

How Much Do You Need?

According to the USDA National Nutrient Database, a large egg has 166 micrograms of both lutein and zeaxanthin. In some supermarkets, specialty eggs with higher levels of both nutrients are available. No formal government recommendations have been set yet for lutein and zeaxanthin. In addition to these antioxidants, eggs provide 13 essential nutrients – including high quality protein, choline, folate, iron and zinc – for only 75 calories.

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About the American Egg Board (AEB)

AEB is the U.S. egg producer's link to the consumer in communicating the value of the incredible egg and is funded from a national legislative checkoff on all egg production from companies with greater than 75,000 layers, in the continental United States. The board consists of 18 members and 18 alternates from all regions of the country who are appointed by the Secretary of Agriculture. The AEB staff carries out the programs under the board direction. AEB is located in Park Ridge, Ill. Visit www.aeb.org for more information.

About the Egg Nutrition Center (ENC)

ENC was established in 1979 for the purpose of providing commercial egg producers and processors, health promotion agencies, and consumers with a resource for scientifically accurate information on egg nutrition and the role of eggs in the health and nutrition of the American diet. The center exists under a cooperative agreement between the American Egg Board (AEB) and United Egg Producers (UEP). ENC is located in Washington, DC. Visit www.enc-online.org for more information.

³ Goodrow EF, et al. Consumption of one egg per day increases serum lutein and zeaxanthin concentrations in older adults without altering serum lipid and lipoprotein cholesterol concentrations. *J Nutr.* 2006; 136: 2519-2524.