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New Study “Pardons” the Misunderstood Egg *Eggs Contribute Insignificant Risk to Heart Disease*

Park Ridge, Ill. (December 16, 2008) – A study recently published online in the journal *Risk Analysis*¹ estimates that eating one egg per day is responsible for less than 1 percent of the risk of coronary heart disease (CHD) in healthy adults. Alternatively, lifestyle factors including poor diet, smoking, obesity and physical inactivity contribute 30 to 40 percent of heart disease risk, depending on gender. This study adds to more than thirty years of research showing that healthy adults can eat eggs without significantly affecting their risk of heart disease.

Study Background

The study evaluated the risk of heart disease associated with egg consumption compared to modifiable lifestyle risk factors (smoking, poor diet, being overweight or obese, physical inactivity). The study authors used data from the 1999-2000 and 2001-2001 National Health and Nutrition Examination Surveys (NHANES) to categorize the U.S. adult population into various groups based on modifiable lifestyle risks. These populations account for 85 percent of all U.S. males ages 25 and older and 86 percent of U.S. females ages 25 and older.

Study Findings

The study found that the consumption of one egg per day contributes less than 1 percent of heart disease risk. Modifiable lifestyle risk factors – smoking, poor diet, being overweight or obese and physical inactivity – accounted for 30 to 40 percent of heart disease risk, while unavoidable risk factors, such as genetics, and potentially treatable risk factors, such as hypertension and diabetes, accounted for 60 to 70 percent.

According to the authors, the NHANES data show that very few Americans are leading lifestyles that may reduce the risk of heart disease: only 3 percent of males and 6 percent of females have none of the modifiable lifestyle risk factors that were investigated. The study authors conclude that efforts to prioritize risk factors and eliminate those that have the largest impact on health are more likely to reduce heart disease risk than recommendations to restrict egg consumption.

“This study should influence health professionals to finally acknowledge decades of research showing that egg consumption is not a significant risk factor for heart disease,” said Leila M. Barraji, Senior Managing Scientist in Exponent’s Health Sciences Center for Chemical Regulation and Food Safety. “The health community should focus on meaningful recommendations when it comes to preventing heart disease, like smoking and obesity, not egg consumption.”

Egg Benefits Outweigh Risks

The study, which was funded by the Egg Nutrition Center, substantiates decades of research challenging the outdated myth that the cholesterol in eggs is linked to increased heart disease risk. Moreover, the study authors note that their analysis did not adjust for the health promoting benefits of eggs which may, in fact, decrease heart disease risk. For example:

- Research has found that overweight men who eat eggs while on a carbohydrate-restricted diet have a significant increase in their HDL levels (the “good” cholesterol) compared to men who do not eat eggs.²
- In a recent study, eating two eggs for breakfast, as part of a reduced-calorie diet, helped overweight or obese adults lose 65 percent more weight and reduce their BMIs by 61 percent more than those eating a bagel breakfast of equal calories. In addition, the study found no significant differences between the HDL and LDL cholesterol levels of the egg and bagel eaters.³
- Eggs are an excellent source of choline. A 2008 study concluded that a diet rich in choline and betaine, a nutrient related to choline, is associated with lower concentrations of homocysteine in the blood. High blood levels of homocysteine are indicative of chronic inflammation, which has been associated with cardiovascular disease, Alzheimer’s and dementia.⁴

Eggs offer a number of beneficial nutrients. One egg has 13 essential vitamins and minerals and is an excellent source of choline and selenium and a good source of high-quality protein, vitamin B 12, phosphorus and riboflavin. In addition to providing one of the most affordable sources of all-natural, high-quality protein, eggs provide a valuable source of energy and help maintain and build the muscle tissue needed for strength.

For More Information

- Contact the [Egg Media Hotline](#) to speak with a researcher or registered dietitian.
- Visit the [Egg Nutrition Center](#) for information on the nutritional benefits of eggs and the [American Egg Board](#) for egg recipes and preparation tips.

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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 edible 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.incredibleegg.org for more information.

About the Egg Nutrition Center (ENC)

The Egg Nutrition Center (ENC) is the health education and research center of the American Egg Board. Established in 1979, ENC provides science-based information to health promotion agencies, physicians, dietitians, nutritional scientists, media and consumers on issues related to egg nutrition and the role of eggs in the American diet. ENC is located in Washington, DC. Visit www.enc-online.org for more information.

¹Barraj, et al. A comparison of egg consumption with other modifiable coronary heart disease lifestyle risk factors: A relative risk apportionment study. *Risk Analysis*. Published online November 4, 2008.

²Mutungi, G et al. Dietary cholesterol from eggs increases plasma HDL cholesterol in overweight men consuming a carbohydrate restricted diet. *J Nutr*. 2008; 138:272-276.

³Vanderwal JS et al , et al. Egg breakfast enhances weight loss. *Int J of Obesity*, published online on August 5, 2008.

⁴Detopoulou, Paraskevi et al. Dietary choline and betaine intakes in relation to concentrations of inflammatory markers in healthy adults: the ATTICA study. *AJCN* 2008; 87:424-430.