

New study 'pardons' the misunderstood egg

December 16 2008

A study recently published online in the journal *Risk Analysis* 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.

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.

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. Barraja, 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.
- 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.

-- 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.

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.

References:

- (1) Barraj, 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.
- (2) Mutungi, 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.
- (3) Vanderwal JS et al , et al. Egg breakfast enhances weight loss. Int J of Obesity, published online on August 5, 2008.
- (4) Detopoulou, 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.

Source: Edelman Public Relations

Citation: New study 'pardons' the misunderstood egg (2008, December 16) retrieved 7 May 2024 from <https://medicalxpress.com/news/2008-12-pardons-misunderstood-egg.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.