



Many cracks in bad image given eggs

This is the first of three columns relating to cardiovascular health. It deals with a myth that eggs and dietary cholesterol are primary causes of heart disease.

The myth has three parts: 1) Increases in blood cholesterol increase a person's risk of heart disease --TRUE. 2) Eggs are a very concentrated source of dietary cholesterol -- TRUE. 3) Blood cholesterol levels are directly related to dietary cholesterol intake -- FALSE.

For decades, health conscious consumers interested in heart health have targeted cholesterol in foods as the number one dietary villain. However, an objective review of the scientific literature for more than 50 years indicates this focus is misdirected. Many other factors are much more important.

Some of the confusion arises from not distinguishing between dietary cholesterol and blood cholesterol. Certainly, high blood cholesterol is related to increased risk of cardiovascular disease, heart attacks, and strokes. However, even this relationship is not a simple one. Some people with high blood cholesterol don't get cardiovascular disease and other people with low blood cholesterol die of heart attacks.

For the vast majority of healthy people, the amount of cholesterol in the blood is affected only slightly by dietary cholesterol. Cholesterol is an important precursor for the synthesis of estrogen, testosterone, and vitamin D. It is so important the body makes its own cholesterol, even if no cholesterol is consumed. When cholesterol is in the diet, the body makes less cholesterol and the change in blood cholesterol levels is minimal.

Even when scientific studies have shown increased dietary cholesterol increases blood cholesterol, often the increase is only statistically significant and not high enough to make a health difference. Studies that have investigated the association between dietary cholesterol and heart disease have found little or no association. Here are some examples.

A study of 12,553 men, called the MRFIT study, found no relationship between dietary cholesterol or egg intake and blood cholesterol levels. A U.S. study on 43,757 male health professionals and another study on 80,082 female nurses, found that the intake of dietary cholesterol was unrelated to coronary heart disease. Other large studies have similar

results.

If eggs were the villain we should see high rates of heart disease where egg consumption is high, but that isn't the case. The average egg consumption for Americans is 4.5 per week. The average in some countries with lower rates of heart disease is 6.5 eggs per week for Japan, 5.1 per week for Spain, and 5 per week for France. High total fat intake and high saturated fat intake are more clearly associated with the risk of heart disease. High fat foods that we typically consume with eggs (sausage, bacon, butter) are more worthy of concern than eggs. Smoking, excess calorie intake, sedentary lifestyle and high blood pressure are directly related to heart disease and stroke.

Some positive aspects of eggs have been ignored. For about 150 calories and 10 grams of total fat, two large eggs provide 20 to 30 percent of the daily requirement for protein, riboflavin and vitamins A and B-12. For people desiring to lower blood cholesterol, it would be more productive to limit total fat to around 50 grams per day than to count milligrams of dietary cholesterol.

Alan Titchenal, Ph.D, CNS and Joannie Dobbs, Ph.D, CNS
are nutritionists in the Department of Human Nutrition, Food and Animal Sciences,
College of Tropical Agriculture and Human Resources, UH-Manoa.
Dr. Dobbs also works with the University Health Service.
