

Eggs – Unscrambling the Confusion

By Jen Allbritton, CN

The health value of eggs has been under scrutiny for some time. The good egg/bad egg debate has been confusing, at best. But do you know all the facts? Avoiding eggs for the wrong reasons may prove to do more harm than good. This article will unscramble the confusion, lay the bad egg concerns to rest, and make the healthy benefits of eggs clear.

The Unwarranted Concerns

The bad egg reputation inevitably boils down to the cholesterol issue. One egg serves up 213 milligrams of cholesterol. Despite the fact that cholesterol is a healthy fat for the body, it is not the cholesterol in foods that cause health problems, but the cholesterol made by our own body that is influenced by stress, poor diets rich in damaged fats and sugars, and other unhealthy lifestyle choices. Furthermore, not only are eggs low in fat, but also half of the fat in eggs is oxidation-resistant monounsaturated, like in olive oil. This healthy fat has actually been found to help lower cholesterol.¹ For even those with high cholesterol levels, eggs have been found to increase cholesterol little if at all.^{2,3} In fact, one study published in the *Journal of Internal Medicine* showed that consumption of two boiled eggs per day increased HDL (good) cholesterol, leaving LDL (bad) cholesterol unchanged.

Loads of Nutrition

A large whole, fresh egg has 75 calories, about six to seven grams of protein, and five grams of fat, with about 1.5 grams of it saturated. It also provides other key nutrients such as vitamin A, K, E, D, B-complex, iron, phosphorus, potassium, and calcium.⁴ Eggs contain all eight essential amino acids, the building blocks of high-quality protein in the body. Eggs also supply choline, which is a fatty substance that is in every living cell and is a major component in our brain. Additionally, choline helps break up cholesterol deposits by preventing fat and cholesterol from sticking to the arteries.^{4,5} Finally, eggs are a good source of lutein and zeaxanthin, two carotenoids known to protect the eyes.⁶ Bear in mind, most of the nutrients reside in the yolk, while the whites are mostly water and protein – so when eating eggs go for the whole egg, not just the whites or egg substitutes.

Nutrition Side Note: the FDA recently approved the practice of irradiating eggs, which is used to kill bacteria like *Salmonella*. Although the FDA admits that the process can lower nutritional content (particularly vitamin A), many other health professionals believe that irradiation may cause further damage and deplete other nutrients like vitamin B, omega-3 fatty acids, and enzymes. Furthermore, it is believed that quality non-irradiated eggs from healthy chickens (such as those we carry) are naturally resistant to bacteria.

Problems with the Common Egg

Most egg-laying factories force the animals to live in a windowless, insulated, and overcrowded environment. They are also usually exposed to artificial day/night cycles designed to stimulate egg production. Sunlight itself is a necessary nutrient and chickens raised in it produce more eggs and eggs with lower cholesterol content.⁵ Commercial chickens are fed rations that typically contain preservatives, mold inhibitors, antibiotics, and pesticides to encourage weight gain and prevent disease breakouts because of the unhealthful conditions. Naturally, all of these factors directly affect the quality of the eggs produced.

There are different terms to identify eggs and the process the animals go through for production. Below are definitions of those terms to help you choose the best egg variety for you and your family.

Your “Alternative” Choices

Brown vs. White: The breed of hen determines the color of the shell. There is no nutritional difference if the hens are fed the same quality diet. Since brown egg layers are slightly larger birds and require more food, brown eggs are usually a bit more expensive than white.

Free Range/Cage-Free: This means that the hens are most often kept in environmentally controlled community houses where they have the freedom to roam and pick up added nutrients. Because these animals are allowed these freedoms, fewer antibiotics and chemicals are needed.

DHA Rich: DHA is a necessary fatty acid for a number of body functions, especially for the brain. Many times our diets do not supply this nutrient in optimal amounts; therefore, eating eggs with a high DHA content is an easy and inexpensive way to obtain more of this valuable nutrient. For example, at *Gold Circle Farm*, DHA-rich marine algae are added into the hens’ feed, which naturally passes into their eggs. Each egg contains approximately 150 mg of DHA, versus 1 mg of DHA in the typical egg.

Fertile Eggs: These eggs are from chickens that have been fertilized by a rooster (a male chicken). A fertile egg will hatch, if allowed, unlike an unfertile egg. There appears to be no nutritional difference between fertile and unfertile eggs. These eggs are sometimes perceived as being healthier because they are produced in a natural way.

Organic: Strict organic standards require these birds to never be given hormones or antibiotics. These healthy hens eat certified organic feed grown without synthetic pesticides, therefore, their eggs have not accumulated pesticides like many of the other varieties.

Omega-Rich: Omega-3 fatty acids are essential nutrients involved in optimal health and Americans are often deficient. Omega-rich egg production requires the chickens be fed food that contains healthy omega-3 fatty acids. For example, *Chino Valley Ranchers* produce omega-rich eggs by feeding their chickens flaxseed. Each egg provides approximately 225 mg of omega-3s.

Egg-rific Cooking Tips

Eggs should be kept in their cartons so they do not lose moisture or absorb refrigerator odors. Three of the best ways to cook eggs include fry, boil, and poach, since they expose the egg to the least amount of oxygen and heat. It is best for the yolk to stay intact since it helps prevent oxidation. This is a chemical process in which the nutrients begin to break down (this is the same process that turns a cut apple brown).⁷

- **Fried Eggs:** Heat a skillet on medium heat then add a small amount of butter or olive oil. (Hot pan, cold oil means food will not stick). Break eggs and slip into skillet. Reduce heat to low. Cook to desired doneness, turning eggs gently to cook both sides or add a small amount of water and cover with a lid to cook tops of eggs.
- **Eggs cooked in the shell:** Place cold eggs in a saucepan, add enough cold water to cover eggs by 1 inch, cover, and bring to a boil. Remove the saucepan from the heat. For soft-cooked eggs, let eggs stand in water for 3 to 5 minutes. For hard-cooked eggs, let eggs stand in water for 20 to 25 minutes, then run cold water over eggs to stop the cooking.
- **Poached Eggs:** Pour 3 inches of water into a saucepan, bring to a boil, and then reduce to a gentle simmer. Break eggs into a dish and slip into water. Cook in simmering water for 3 to 5 minutes or until desired doneness.

Many negative opinions about eggs have been caused by poor public relations, not nutrient reality. This whole food provides an abundance of valuable nutrients, including a perfect balance of protein. An added bonus, eggs are low in calories and easy on your pocketbook. So do not let the good egg/bad egg confusion get you down, eat and enjoy eggs – with an unscrambled state of mind!

¹ McNamara DJ. Dietary cholesterol: Effect on lipid metabolism. *Curr Opin Lipidology* 1990;1:18-22.

² Vorster HH, Benade AJ, Barnard HC, Locke MM, Silvis N et al. Egg intake does not change plasma lipoprotein and coagulation profiles. *Am J Clin Nutrition* 1992;55:400-410.

³ Ginsberg HN, Karmally W, Siddiqui M, Halleran S, Tall AR et al. A dose-response study of the effects of dietary cholesterol on fasting and postprandial lipid and lipoprotein metabolism in healthy young men. *Arterio and Thromb* 1984;14:576-586.

⁴ Roehl, Evelyn. *Whole Food Facts. The Complete Reference Guide*. Healing Arts Press. 1996.

⁵ Hattersley, Joseph G. *Eggs are Great Food! Townsend Letter for Doctors & Patients*. 1996.

⁶ Journal of the American College of Nutrition, Oct. 2000. Supplement. Found at www.mercola.com on May 9th, 2001.

⁷ Ross, Julia. M.A. *The Diet Cure*. Penguin Book. New York 2000

Extra Research

Eggs from Pastured Poultry is More Nutritious than Conventional

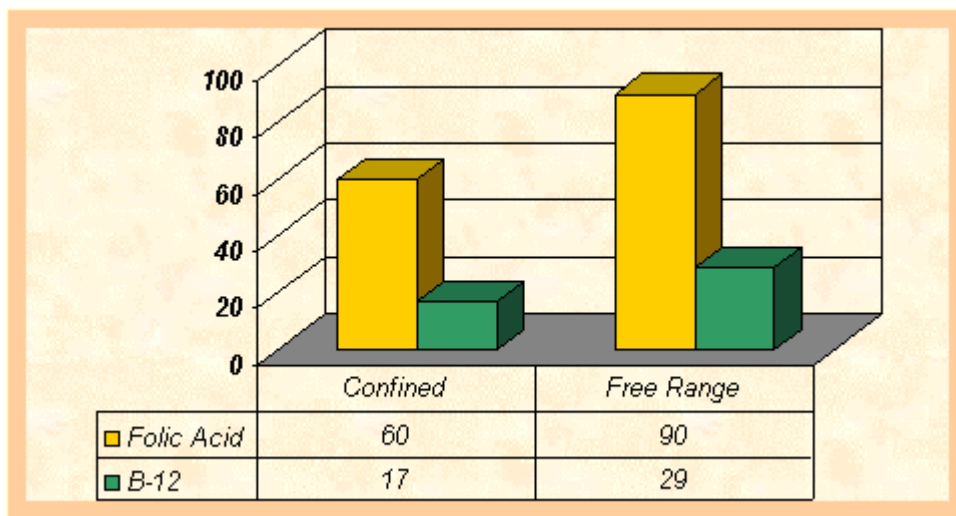
Eggs from pastured poultry are higher in omega-3 fatty acids, vitamin E, and vitamin A. Meanwhile, they are lower in total fat, saturated fat, and cholesterol. In addition, there is a *direct* relationship between feed, yolk color, and the nutrient content of the egg. The more orange the yolk, the higher the level of health-enhancing carotenoids. Compared to supermarket eggs, eggs from pastured poultry are a vivid yellow/orange---proof of a richer store of disease-fighting carotenes.

(Bornstein, S. and I. Bartov (1966). "Studies on egg yolk pigmentation. I. A comparison between visual scoring of yolk color and colorimetric assay of yolk carotenoids." *Poult Sci* 45(2): 287-96.)

Eggs from free-range hens are higher in folic acid and vitamin B12

Now there's another good reason to purchase eggs from pastured poultry farmers: you may be getting more folic acid and vitamin B12, two very important vitamins. This information comes from a British study published in 1974. At the time, British consumers were concerned about the trend toward factory farming. Specifically, they thought factory eggs might not be as nutritious as eggs from free-ranging birds. An elaborate study confirmed their suspicions. The eggs from free-range hens contained significantly more folic acid and vitamin B12, as you can see by the graph below.

The researchers also looked for differences in the fatty acid content of the eggs but did not find any. Now we know why. In the 1970s, little was known about the benefits of omega-3 fatty acids, so the researchers didn't even bother to look for them in the eggs.



Tolan et al, "Studies on the Composition of Food, The chemical composition of eggs produced under battery, deep litter and free-range conditions." *Br. J. Nutrition*, (1974) 31:185.)

Egg yolks are the richest known source of lutein and zeaxanthin, essential vitamins not found in your multi-vitamin tablet.

Eggs are gaining new respect from nutritionists, partly for their abundance of two carotenes --- lutein and zeaxanthin. These antioxidant vitamins are essential for the protection of the macula, an area of the retina that provides our best central vision. Eggs are the richest known source. "Macular degeneration," the term for damage to this area of the retina, is the leading cause of blindness in people over 55 years of age. Lutein and zeaxanthin protect the macula from the destructive effects of light. The deeper the yellow-orange color of yolks, the more lutein and zeaxanthin they contain and the more eye-protection they offer.

There is also new evidence linking lutein and zeaxanthin with a lower risk of colon cancer. According to a recent study, "Of all the carotenoids investigated, only lutein and zeaxanthin showed a protective effect against colon cancer, with an enhanced effect in younger people."

(Slattery, M. L., Benson, J., Curtin, K., Ma, K. N., Schaeffer, D., and Potter, J. D. (2000). *Am J Clin Nutr* 71, 575-82.)

Eggs from pastured layers are higher in omega-3 fatty acids and vitamin E.

In a recent study, one group of chickens was confined indoors (the conventional system) and another was allowed to free range. Both groups were fed the same commercial mixed diet. The chickens that were able to add grass to the menu produced eggs that were higher in omega-3s and alpha-tocopherol (vitamin E.) Both omega-3 fatty acids and vitamin E have been linked with lower rates of cancer and cardiovascular disease in humans. (Lopez-Bote et al, "Effect of free-range feeding on omega-3 fatty acids and alpha-tocopherol content and oxidative stability of eggs." *Animal Feed Science and Technology*, 1998. 72:33-40.)

Eating eggs does not appear to increase the risk of cardiovascular disease or stroke.

Cutting back on egg consumption has been widely recommended as a way to lower blood cholesterol levels and prevent coronary heart disease. Is this valid advice? Recently, researchers took a close look at the egg-eating habits and heart health of 118,000 men and women. The scientists reported that "we found no evidence of an overall significant association between egg consumption and risk of CHD [coronary heart disease] in either men or women." In fact, they found that people who ate from 5 to 6 eggs per week had a lower risk of heart disease than those who ate less than one egg per week. (Hu, F. B., M. J. Stampfer, et al. (1999). "A prospective study of egg consumption and risk of cardiovascular disease in men and women." *JAMA* 281(15): 1387-94.)

One wonders what the scientists would find if they looked at the heart health of those lucky people who eat eggs from pastured hens?

Research blurbs found on www.eatwild.com. Visit this web site for more terrific information on pasture fed animals.