

Are Egg Yolks Good or Bad?

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✓ Fact Checked

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STORY AT-A-GLANCE

- › Egg yolks provide valuable vitamins (A, D, E and K), omega-3 fats and antioxidants, much of which is not found in egg whites
- › The cholesterol in egg yolks is not associated with high blood cholesterol levels or heart disease
- › The yolk is arguably the healthiest part of the egg and should be consumed lightly cooked or raw (provided it's free-range and organic)

Egg white omelets and other yolk-free recipes have become synonymous with "healthy" to many. But if you toss out your egg yolks, you're also tossing out some of the most nutritious parts of the egg.

For instance, egg yolks (but not whites) contain vitamins A, D, E and K along with omega-3 fats. Compared to the whites, egg yolks also contain more beneficial folate and vitamin B-12. The yolks also contain far more of the nutrient choline than the whites, and all of the antioxidants lutein and zeaxanthin.

Egg yolks have been unfairly vilified for decades because they contain cholesterol and saturated fat. But contrary to the prevailing nutritional dogma that such dietary components need to be avoided, the cholesterol and saturated fat in animal foods like egg yolks are quite beneficial for your health.

Cholesterol-Rich Foods Are Good for Your Health

Many of the healthiest foods happen to be rich in cholesterol and saturated fats. Cholesterol has been demonized since the early 1940s, following the popularization of flawed research by Ancel Keys, who laid the groundwork for decades of other studies villainizing it.¹

However, cholesterol has many health benefits. It plays a key role in regulating protein pathways involved in cell signaling and may also regulate other cellular processes,² for instance.

It's already known that cholesterol plays a critical role within your cell membranes, but research suggests cholesterol also interacts with proteins inside your cells, adding even more importance. Your body is composed of trillions of cells that need to interact with each other.

Cholesterol is one of the molecules that allows for these interactions to take place. For example, cholesterol is the precursor to bile acids so, without sufficient amounts of cholesterol, your digestive system can be adversely affected. It also plays an essential role in your brain, which contains about 25% of the cholesterol in your body. It is critical for synapse formation, i.e. the connections between your neurons, which allow you to think, learn new things, and form memories.

Eating Cholesterol-Rich Foods Doesn't Lead to High Cholesterol

One egg yolk contains about 210 milligrams (mg) of cholesterol, which is why public health agencies have long suggested Americans limit their intake. This is a highly flawed recommendation on multiple levels; for starters, "high" cholesterol does not cause heart disease, and beyond that, eating cholesterol-rich food doesn't cause your cholesterol levels to increase.

Cleveland Clinic cardiologist Dr. Steven Nissen estimates that only 20% of your blood cholesterol levels come from your diet. The rest of the cholesterol in your body is produced by your liver, which it makes because your body needs cholesterol.

One survey of South Carolina adults found no correlation of blood cholesterol levels with so-called "bad" dietary habits, such as consumption of red meat, animal fats, butter, eggs, whole milk, bacon, sausage, and cheese.³ Consumption of more than six eggs per week also does not increase your risk of stroke and ischemic stroke, for instance.⁴

Egg Yolks Have Little Impact on Cholesterol Levels for Most

Further, eating two eggs a day does not adversely affect endothelial function (an aggregate measure of cardiac risk) in healthy adults, supporting the view that dietary cholesterol may be far less detrimental to cardiovascular health than previously thought.⁵

According to Chris Masterjohn, who received his Ph.D. in nutritional sciences from the University of Connecticut:⁶

"Since we cannot possibly eat enough cholesterol to use for our bodies' daily functions, our bodies make their own. When we eat more foods rich in this compound, our bodies make less. If we deprive ourselves of foods high in cholesterol – such as eggs, butter, and liver – our body revs up its cholesterol synthesis. The end result is that, for most of us, eating foods high in cholesterol has very little impact on our blood cholesterol levels.

In seventy percent of the population, foods rich in cholesterol such as eggs cause only a subtle increase in cholesterol levels or none at all. In the other thirty percent, these foods do cause a rise in blood cholesterol levels. Despite this, research has never established any clear relationship between the consumption of dietary cholesterol and the risk for heart disease ... Raising cholesterol levels is not necessarily a bad thing either."

U.S. Dietary Guidelines Remove Dietary Cholesterol Limit

If you're still worried about the cholesterol in egg yolks, take a look at the 2015 U.S. Dietary Guidelines, which finally dropped its 2010 guidelines that described cholesterol-

rich foods as "foods and food components to reduce."⁷ They advised people to eat less than 300 milligrams (mg) per day, despite mounting evidence that dietary cholesterol has very little to do with cholesterol levels in your body.

The updated guidelines finally removed this misguided suggestion, and they even added egg yolks to the list of suggested sources of protein. Dietitian Lisa Drayer told CNN:⁸

"If you connect the dots together scientifically, we don't believe there is a strong influence between dietary cholesterol and blood cholesterol ... So the government advice is catching up to the science."

The long-overdue change came at the advice of the Dietary Guidelines Advisory Committee (DGAC), which finally acknowledged what the science shows, which is that "cholesterol is not considered a nutrient of concern for overconsumption."⁹

Dr. Luc Djoussé, an associate professor at Harvard Medical School and Brigham and Women's Hospital, who has conducted research on heart disease and eggs, further told TIME, "Dietary cholesterol does not translate into high levels of blood cholesterol."¹⁰

Now, in 2022, health leaders admit cholesterol not only isn't the bad egg you've been led to believe, but is an essential component of good health. "Your body needs cholesterol to perform important jobs, such as making hormones and building cells," the CDC says.¹¹

More Research Shows Eating Eggs Doesn't Raise Heart Risks

According to a study published in the American Journal of Clinical Nutrition, even carriers of the ApoE4 gene, which makes them highly susceptible to heart disease, egg and cholesterol intake was not associated with an increased risk of coronary artery disease.¹²

The men in the study consumed an average of 2,800 mg of cholesterol a week via their diets, more than 25% of which came from eating an average of four eggs a week. No association was found between the consumption of cholesterol or eggs and heart disease, either in ApoE4 carriers or non-carriers.

Carotid artery thickness, which is a measure of atherosclerosis, was also not associated with cholesterol consumption.¹³ Jyrki K. Virtanen, Ph.D., an adjunct professor of epidemiology at the University of Eastern Finland and the study's lead author, told The New York Times:¹⁴

"Moderate intake of cholesterol ... doesn't seem to increase the risk of heart disease, even among those people at higher risk."

On the contrary, separate research found dietary cholesterol from eggs led to increases in beneficial HDL (high-density lipoprotein) cholesterol.¹⁵ This is the "good" cholesterol that helps keep cholesterol away from your arteries and remove any excess from arterial plaque, which may help to prevent heart disease.

Superstar Nutrients Are Plentiful in Egg Yolks

When you eat egg yolks, you're providing your body with valuable nutrients, including the following:

- **Choline** — Choline is a B vitamin known for its role in brain development. It's a precursor to the neurotransmitter acetylcholine, which plays a role in both muscle control and memory. Choline is also important for the health of your cell membranes and has anti-inflammatory properties.

An estimated 90% of the U.S. population may be deficient in choline, with as many as 95% of pregnant women deficient.¹⁶ Some of the symptoms associated with low levels include memory problems, lethargy and persistent brain fog. Your body can only synthesize small amounts of this nutrient, so you need to get it from your diet. One egg yolk contains nearly 215 mg of choline.

- **Lutein and Zeaxanthin** — Lutein and zeaxanthin are carotenoids. Zeaxanthin is an antioxidant carotenoid found in your retina, but it cannot be made by your body, so you must get it from your diet. Lutein is found in your macular pigment, which helps protect your central vision and aids in blue light absorption.

Both zeaxanthin and lutein are also found in high concentrations in your macula lutea, the small central part of your retina responsible for detailed central vision.¹⁷ Together, they're believed to serve two primary roles that are particularly valuable for your vision health:

1. To absorb excess photon energy
2. Quench free-radicals before they damage your lipid membranes

While there's no recommended daily intake for lutein and zeaxanthin, studies have found health benefits for lutein at a dose of 10 mg per day, and at 2 mg/day for zeaxanthin. One egg yolk contains about 0.2 mg of lutein and zeaxanthin.

Egg yolks are also an excellent source of healthy fat and protein, while providing you with vitamins that many Americans are lacking. According to Masterjohn, eating egg yolks may even be an ideal way to resolve common nutrient deficiencies, including vitamins A, E and B6, copper, calcium and folate.¹⁸

What's the Best Way to Prepare Eggs?

Eggs are so good for you that you can easily eat one dozen eggs per week, which is actually a simple and cost-effective way to add valuable nutrition to your diet – provided you cook them properly or, more aptly, don't cook them.

The best way to consume eggs, provided they come from a high-quality source, is to not cook them at all, which is why my advanced nutrition plan recommends eating your eggs raw. In the beginner plan, however, eggs are still included, and you can prepare them anyway you like them. Less "well done" eggs are vastly preferable, such as poached, soft-boiled, or over-easy with very runny yolks.

It's important to consume egg yolks that are only lightly cooked, as the heat will damage many of the highly perishable nutrients in the yolk. Two raw egg yolks have antioxidant properties equivalent to half a serving of cranberries (25 grams) and almost twice as

many as an apple. But the antioxidant properties are reduced by about 50% when the eggs are fried or boiled, and reduced even more if they're microwaved.¹⁹

Additionally, the cholesterol in the yolk can be oxidized with high temperatures, especially when it is in contact with the iron present in the whites and cooked, as in scrambled eggs, and such oxidation contributes to chronic inflammation in your body. For this reason, scrambled eggs are one of the *worst* ways to prepare eggs if you want them to be healthy.

Organic and Free-Range: Choose Your Eggs Wisely

Even before you master how to cook your eggs properly, it's important to choose eggs from a high-quality source. Free-range or "pastured" organic eggs are far superior when it comes to nutrient content, while conventionally raised eggs are far more likely to be contaminated with disease-causing bacteria such as salmonella.

An egg is considered organic if the chicken was only fed organic food, which means it will not have accumulated high levels of pesticides from the grains (mostly GM corn) fed to typical chickens. Ideally, the chicken should have access to the outdoors where it can consume its natural diet.

Testing has confirmed that true free-range eggs are far more nutritious than commercially raised eggs, likely due to the differences in diet between free-ranging, pastured hens and commercially farmed hens. In one egg-testing project, Mother Earth News compared the official U.S. Department of Agriculture (USDA) nutrient data for commercial eggs with eggs from hens raised on pasture and found that the latter typically contains:²⁰

- 2 to 3 times more vitamin A
- 2 times more omega-3 fatty acids
- 3 times more vitamin E
- 7 times more beta-carotene

In another study, researchers at Penn State College of Agricultural Sciences found that compared to eggs from conventionally-raised chickens, eggs from pasture-raised hens also had:²¹

- Double the amount of vitamin E and long-chain omega-3 fats
- Less than half the ratio of omega-6 to omega-3 fatty

The key to finding truly free-range, pastured eggs is to buy your eggs locally. This is typically even preferable to organic eggs from the grocery store. If you live in an urban area, visiting the local health food stores is typically the quickest route to finding the high-quality local egg sources.

Farmers markets and food co-ops are another great way to meet the people who produce your food. With face-to-face contact, you can get your questions answered and know exactly what you're buying. Better yet, visit the farm and ask for a tour. If they have nothing to hide, they should be eager to show you their operation.

If you're purchasing your eggs from a supermarket, be aware that labels can be very deceptive. The definitions of "free-range" are such that the commercial egg industry can run industrial farm egg-laying facilities and still call them "free-range" eggs, despite the fact that the birds' foraging conditions are far from what you'd call natural.

So, if you're looking for real pasture-raised eggs, here are some clues from U.S. News & World Report:²²

- **Caged hens** are confined to cages with a 67-square inch space each. They never see the light of day and consume a corn or soy diet. Over 90 percent of **eggs in the U.S.** come from hens that are kept in cages for their entire egg-laying lives.
- **Cage-free hens** have more room than caged hens, since each is given less than 1 square foot. Still, they're not entirely "free," since they're confined to barns and consume a corn or soy diet.
- **Free-range hens** are allotted less than 2 square feet per hen ... have more space than their caged and cage-free peers, but they don't get outdoors as much as you

may think. Some seldom get to see the light of day and many eat a corn- or soy-based feed.

- ***Pasture-raised hens are given at least 108 square feet each and consume some feed and lots of grass, bugs, worms and anything else they can find in the dirt. They tend to be let out of the barns early in the morning and called back in before nightfall.***

The Highest-Quality Egg Yolks Are Bright Orange, Not Yellow

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You can tell your eggs are free range or pastured by the color of the egg yolk. Foraged hens produce eggs with bright orange yolks. Dull, pale yellow yolks are a sure sign you're getting eggs from caged hens that are not allowed to forage for their natural diet. So in answer to the question, "Are egg yolks good or bad?" – the answer is a resounding good.

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