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HEALTH HAZARD OR SUPERFOOD?

Why modern science says the humble egg deserves a place on our plates

For decades, the humble egg has carried an unfortunate reputation. It has been celebrated as one of nature's most complete foods, yet many people have continued to avoid it because of concerns about cholesterol and heart disease. The result is that a highly nutritious, affordable and easily available food has often been misunderstood.

Today, scientific evidence gives us a more balanced picture. For most healthy people, eggs can be an important part of a healthy diet. They provide high-quality protein, essential vitamins and minerals, and nutrients that are particularly valuable for brain development, eye health and overall wellbeing.

HOW DID EGGS GET A BAD REPUTATION?

The concern around eggs began several decades ago when heart disease research focused heavily on dietary fat and cholesterol. The Seven Countries Study led by physiologist Ancel Keys in the 1960s linked diets high in saturated fat with increased heart disease risk. Since egg yolks contain cholesterol, eggs became one of the foods people were advised to restrict. However, nutrition science has evolved. We now understand that the cholesterol we eat and that in our blood are not directly related in most people. The liver produces most of the cholesterol needed by the body and adjusts its own production depending on dietary intake.

Over time, large studies have shown that moderate egg consumption is not associated with increased risk of heart disease in healthy individuals. Modern nutrition advice has therefore shifted away from focusing on one food or one nutrient and towards the overall quality of the diet.

EGGS: A NUTRITIONAL POWERHOUSE

An egg may be small, but it is packed with nutrients. One large egg provides approximately 6g of high-quality protein containing all the essential amino acids needed by the body. Egg protein is considered one of the highest-quality proteins available and is often used as a reference when comparing other protein sources. They are also rich in vitamin B12, selenium, iodine, riboflavin, biotin, phosphorus and vitamin D. They are among the few natural foods that provide vitamin D, a nutrient that many people do not consume adequately.

One of the most important nutrients in eggs is choline. A single egg provides about one-fourth of an adult's daily choline requirement. Choline is essential for brain development, nerve function, healthy cell membranes and liver health. Choline also plays a role in transporting fat out of the liver. When the body does not receive enough choline, fat can accumulate within liver cells, contributing to fatty liver. While eating eggs is not a treatment for fatty liver disease, including choline-rich foods such as eggs as part of a balanced diet can help support normal liver function.

The yolk also contains the antioxidants lutein and zeaxanthin, which accumulate in the retina and help protect eye health, particularly against age-related macular degeneration and cataracts.

KEEP THE YOLK

Many people eat only egg whites because they believe the yolk is unhealthy. While egg whites are an excellent source of protein and contain almost no fat or cholesterol, the yolk contains most of the egg's nutritional value. The yolk provides vitamins A, D, E and K, choline, iron, folate, phosphorus, lutein and zeaxanthin. In other words, removing the yolk removes much of what makes an egg nutritionally special. For most healthy individuals, eating the whole egg provides the greatest benefit. People with specific concerns such as very high LDL cholesterol or established cardiovascular disease may need individual guidance from their healthcare provider.

EGGS, CHOLESTEROL AND HEART: WHAT SCIENCE SAYS TODAY

The current evidence is reassuring. Large studies involving hundreds of thousands of participants have generally found that moderate egg consumption does not increase the risk of heart disease or stroke in healthy adults. Here, the term moderate egg consumption generally refers to about three–seven eggs per week (up to one egg daily). This level has the strongest evidence supporting safety.

Some studies have also shown that many healthy individuals can consume more than one egg daily without adverse effects on cholesterol levels, particularly when the overall diet is healthy. However, long-term research on very high egg intake over many years is limited. The important point is that eggs should be viewed as part of a dietary pattern. An egg eaten with vegetables, whole grains and healthy fats is very different from eggs regularly consumed with processed meats, refined carbohydrates and a diet high in saturated fat.

EGGS AND DIABETES

People with diabetes often worry about eating eggs, but this concern is frequently exaggerated.

Eggs contain almost no carbohydrates, so they do not cause the rapid increase in blood glucose seen with sugary foods, sweets or refined grains. They are a valuable source of high-quality protein, which helps maintain muscle mass, improves satiety and supports overall nutrition. This is particularly important in India, where many people — including those with diabetes — do not consume enough protein. Eggs can be an affordable and convenient way to improve protein intake.

Clinical trials have generally shown that moderate egg consumption does not worsen blood glucose control, insulin sensitivity or cholesterol levels in people with type 2 diabetes.

Some long-term observational studies have reported a possible association between higher egg intake and cardiovascular risk among people with diabetes. However, such studies cannot prove that eggs themselves are responsible. The overall dietary pattern and lifestyle may play a major role. For most people with diabetes, eggs can be included as part of a balanced diet. Those with poorly controlled diabetes, very high LDL cholesterol or existing heart disease should discuss their overall dietary pattern with their doctor or dietitian.

The message should not be to fear eggs, but to consume them wisely.

EGGS AND GROWING CHILDREN

Eggs are among the best foods for growing children. They provide high-quality protein along with nutrients essential for growth and brain development, including choline, vitamin B12, vitamin D, iron and healthy fats. Early childhood is a period of rapid brain development, and nutrients such as choline and DHA (an omega-3 fatty acid) play important roles in this process. Research has shown that introducing eggs during complementary feeding, usually around six months of age, can support healthy growth and may reduce the risk of growth faltering in young children. For school-going children, eggs are an excellent breakfast or snack option because they provide lasting energy and help improve protein intake.

EGGS DURING PREGNANCY

Eggs can be especially valuable during pregnancy because of their choline content. Choline supports the development of the baby's brain and nervous system, yet many women do not consume enough of this nutrient. One egg provides a significant amount of daily choline needs and can be an excellent addition to a balanced pregnancy diet unless there are medical reasons to avoid it.

Desi Eggs, Commercial Eggs and Designer Eggs

In India, many people believe that *desi* (country) eggs are far more nutritious than commercial poultry eggs. The reality is more

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