

OPTIMAL HEALTH UNIVERSITY™

Presented by Dr. Shirley, Dr. Choate, Dr. Rausenberger, & Dr. Smith

Egg-cellent News About Eggs

For years, eggs have suffered from a bad reputation. We've been warned that the cholesterol in egg yolks will surely clog our arteries and cause cardiovascular disease. So, an entire generation of health-conscious eaters dumped the yolks and ate pale, flavorless egg-white omelets — or just avoided eggs altogether.

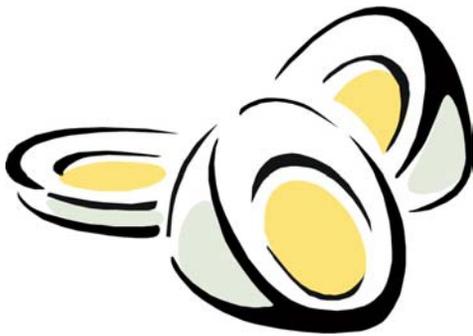
Your doctor at Spinal and Sports Care Clinic welcomes recent findings that absolve eggs of their alleged nutritional sins. We now know that dietary cholesterol isn't necessarily a bad thing, and eggs are packed with important nutrients that support wellbeing. Read on to learn why eggs — yolks and all — are back on the menu.



Researchers have discovered a genetic component to how each individual's body reacts to dietary cholesterol (*Nutr Bull* 2006;31:21-7).

After consuming three eggs daily for 30 days, 70 percent of subjects in one study showed no change in blood cholesterol levels. The remaining 30 percent had increases of both HDL — “good” cholesterol that helps keep the arteries clear — and LDL cholesterol, the form found in clogged arteries (*Curr Opin Clin Nutr Metab Care* 2006;9:8-12).

Dangerous levels of blood cholesterol are more closely related to obesity, smoking, or lack of physical activity. A diet high in trans fats — found in hydrogenated oils in margarine and many processed foods — is also a harbinger of atherosclerosis.



So why have we learned to fear eggs and other cholesterol-rich foods? Your doctor at Spinal and Sports Care Clinic explains that earlier research implicated dietary cholesterol in *atherosclerosis*, or hardening of the arteries, a precursor to heart attack and stroke.

Cholesterol is indeed a component of the “plaque” that coats the insides of arteries in atherosclerosis. However, two-thirds of the cholesterol in our blood is produced by our bodies to maintain the functions described above. And for most people, the remaining third that comes from food appears to not cause spikes in blood cholesterol levels that contribute to atherosclerosis.

The Cholesterol Question

The image problem for egg yolks stemmed from their high cholesterol content. Like all animal foods, eggs contain this essential substance. All animals' bodies — including the human body — require cholesterol. It is a major component of cell membranes as well as the insulating sheath that coats neurons to help the nervous system transmit electrical signals efficiently.

Cholesterol is also converted into bile by the liver to aid in the digestion of fats and the absorption of fat-soluble vitamins including vitamins A, D, K, and E. Furthermore, the body needs cholesterol to synthesize vitamin D (the body makes most of its own vitamin D) as well as adrenal and sex hormones.

Find Out More About Nutrition and Wellness Research From Your doctor at Spinal and Sports Care Clinic

If you are interested in nutrition and wellness research, you have come to the right place! Your doctor at Spinal and Sports Care Clinic is committed to providing patients with the latest cutting-edge research.

We are focused on teaching our patients and community about this vital health information, which will jump-start them on the road to wellness. To this end, each week we present one hot-off-the-presses *Optimal Health University*® topic. To find out more about this revolutionary approach to patient education, or to suggest future topics, please call our office today!

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A small percentage of people with specific health conditions should strictly limit dietary cholesterol to protect themselves against heart attack and stroke. For most of us, though, the advice to avoid eggs is simply outdated.



Proteins and Amino Acids

Eggs are packed with nutrients our bodies require. An egg contains six to seven grams of protein as well as all eight of the essential amino acids, called “essential” because our bodies cannot produce them and therefore must acquire them from food.

Amino acids are the building blocks of proteins required for cell processes and tissue regeneration. For this reason, eggs are an especially important food for people who do not eat meat. Additionally, growing children in particular need plenty of protein-building amino acids — 10 to 20 percent more than adults.

Because of their moderate protein and fat content, enjoying eggs at breakfast causes satiety and can cut down on overeating throughout the day. This helps to maintain a healthy weight and avoid obesity-related cholesterol and cardiovascular problems.

A Bounty of Carotenoids

Eggs are a rich source of the health-promoting carotenoids lutein and zeaxanthin. These two pigments give egg yolks their vivid color and are also present in leafy green vegetables, though in a less easily absorbed form.

Lutein and zeaxanthin are best known for their protective effect on the eyes. These red-orange pigments are thought to absorb high-energy blue light, shielding the retina to prevent macular degeneration and cataracts. Similarly, these carotenoids found in egg yolks boost the skin’s resistance to sun damage.

Research further suggests that lutein and zeaxanthin offer defense against cancers of the breast and colon as well as heart disease and stroke.

Other Nutrients in Eggs

Eggs are an excellent source of choline, a critical nutrient for brain development and function. Most people do not get adequate choline in their diets, according to recent nutritional surveys (*Nutr J* 2009;8:14).

Choline is particularly important for mothers-to-be before conception and during pregnancy — higher levels of prenatal choline intake are associated with lower risk of birth defects of the brain and spinal cord that occur in the first weeks of pregnancy (*Am J Epidemiol* 2004;160:102-9).

Other nutrients plentiful in eggs include vitamins A and E, several B vitamins, iron and phosphorous. A comparison of nutrient intake of egg

consumers and nonconsumers revealed that the egg consumers took in significantly higher levels of these and other nutrients (*J Am Coll Nutr* 2000;19:556S-62S).

Know Your Eggs’ Source

When you buy eggs, keep in mind that not all eggs are created equal. Chickens are naturally omnivores and thrive best in “free-range” outdoors settings, eating a varied diet. Besides the ethical concerns of the typical cramped, indoor battery-cage egg operation, chickens that live on commercial feed produce eggs with substantially lower levels of vitamins A and E and heart-healthy omega-3 fatty acids (*Renew Agr Food Syst* 2010;25:45-54).

Outdoor chickens also benefit from natural sunshine to boost egg nutrition.

Another benefit to eggs from free-range chickens is better sanitation. Chicken raised in less crowded conditions are less likely to carry salmonella, a bacteria implicated in many food contamination outbreaks in the last several years.

A study of flocks in the United Kingdom found that caged chickens are four times more likely to carry salmonella than their free-range cousins (*Vet Rec* 2007;161:471-6).

Finally, do a little research into food-labeling laws to understand the definitions of “free-range” and other terms used to market eggs. And, when possible, purchase eggs from a local farmer.

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