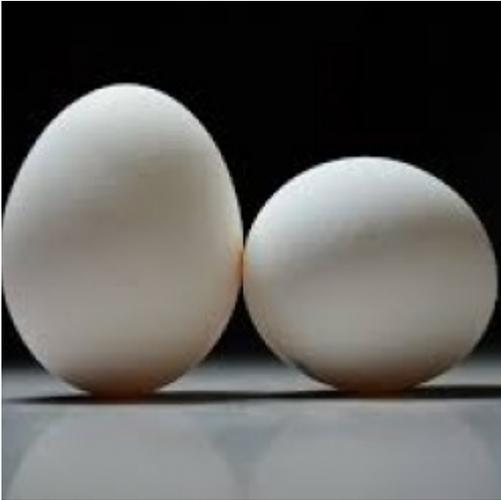


To Gain Muscle Eat Whole Eggs, Not Just the Whites



By Ruth Kava — January 8, 2018



Credit:Pixabay.com [1]

Eggs have been a dietary bugaboo for decades because of the cholesterol within their yolks. But since [recent research](#) [2] has indicated that for most people, dietary cholesterol doesn't translate into increased blood cholesterol levels, investigators have focused more on the positive aspects of whole egg consumption — their content of essential nutrients (e.g. choline and vitamin D) being one such characteristic, which could impact muscle development.

People who do resistance training to get a more muscular physique are encouraged to eat protein-rich foods or supplements post-exercise to help add muscle. Since egg protein is about as good as it gets, conventional wisdom has been that you should eat egg whites (which contain about 60 percent of an egg's protein complement), but avoid the yolk. However, a recent study questions whether this is really the best advice.

Writing in the *American Journal of Clinical Nutrition*, Dr. Nicholas A. Burd from the University of Illinois at Urbana-Champaign and colleagues [described](#) [3] a study comparing the effect of consuming whole eggs vs only egg whites on muscle protein synthesis post-resistance training. They examined rates of muscle protein synthesis in 10 young men (average age 21 years) who were trained in resistance exercise.

The men performed maximal resistance exercises (leg press and leg extension), and immediately afterwards consumed either 3 whole eggs or an equivalent amount of protein from egg whites. The study design used is called a crossover, which is better at identifying an effect than conventional studies. The participants were first fed one type of protein, and then the other on a second exercise occasion, 7-14 days later (this is the crossover).

Leucine, one of the amino acids 20 amino acids that make up protein, which is found in both whole

eggs and egg whites, was labeled with the isotope ^{13}C (1). This enabled the researchers to be able to track the appearance of dietary amino acids in the plasma of the study participants as well as the synthesis of muscle protein under each dietary condition.

They found that although the labeled leucine appeared in the men's blood significantly faster after they ate the egg whites, over the course of a 5 hour observation period, it was similarly available in both dietary conditions (66 percent of that consumed in the egg white condition, and 68 percent in the whole egg condition). However, eating the whole eggs led to a significantly greater increase in leg muscle protein synthesis than consuming just egg whites.

These data don't support the notion that consuming only egg whites is just as effective in stimulating post-exercise muscle protein production as is eating whole eggs, even though the amount and type of protein are the same. Dr. Stuart M. Phillips from McMaster University in Ontario, Canada, noted in an accompanying [editorial](#) [4]:

Although it has long been vilified, it seems that the egg may have more to offer, from a muscle perspective, than we previously realized. As a relatively low-cost and nutrient-dense source of protein the egg rightfully deserves some attention as we look for sources of dietary protein with an expanding global population.

NOTE:

(1) ^{13}C , an isotope of "normal" ^{12}C , makes up about one percent of all carbon. It is not radioactive.

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