



Don't ditch the yolk!

Whole egg 'beats' egg white for muscle strength post-exercise

A new research paper^[1] has reported that consumption of whole eggs promotes greater muscle-building after exercise than the equivalent amount of egg whites. The authors concluded that the 'extra' vitamins, minerals and fats in egg yolks may have a role in modulating muscle protein synthesis after a protein meal in healthy adults.

The consumption of protein-dense foods in the form of both whole eggs and egg whites is known to have a positive effect on total body protein, and high levels of leucine - an amino acid believed to drive muscle protein synthesis - present in eggs are thought to help influence muscle protein synthesis following a meal containing egg protein in healthy adults.

Researchers from the University of Illinois and the University of Toronto set out to discover if there was a difference in response if egg protein was consumed in isolated form (egg white) versus whole egg. Ten men were resistance-trained and took part in a crossover study in which they were given the same amount (18g) of protein, either as whole eggs or as egg white, following exercise. Detailed measurements of protein metabolism were made.

The researchers found that although leucine from the protein appeared more quickly in the blood circulation after consumption of egg whites compared to whole eggs, a bigger increase in muscle protein synthesis was observed after consumption of whole eggs, despite similar availability of leucine.

The researchers concluded that the extra vitamins, minerals and fats in whole eggs may have anabolic (muscle-building) properties, over and above the high levels of leucine. The researchers commented that dietary protein may show different muscle-building effects when consumed as part of its natural whole-food matrix, rather than in an isolated form, and the removal of the yolk and its associated nutrients from eggs may limit the stimulation of muscle protein synthesis rates as well as overall human health.

In conclusion, this work supports recommendations that nutrient- and protein-dense foods are cornerstones to meeting daily protein requirements to optimise muscle protein synthesis rates with exercise.

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For more information, please contact the British Egg Information Service on 020 7052 8899

^[1] American Journal of Clinical Nutrition, October 2017, <https://www.ncbi.nlm.nih.gov/pubmed/28978542>
