

Testing protein leverage in lean humans: a randomised controlled experimental study

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Proper protein intake crucial for moderating energy intake, keeping obesity at bay.

Obesity is a growing problem worldwide, but proper protein consumption can help keep it at bay, according to a paper published Oct. 12 in the online journal [PLoS ONE](#). The researchers found that, when subjects were fed a 10% protein diet, they consumed 12% more energy over four days than they did on a 15% protein diet. Moreover, 70% of the increased energy intake on the lower protein diet was attributed to snacking. When the [protein content](#) was further increased to 25%, however, the researchers observed no change in behavior relative to the 15% [protein diet](#).

It had previously been suggested that protein content plays an important role in determining overall energy intake, and thus affects obesity, but until this study, experimental verification had been lacking. To test the hypothesis, the researchers tested 16 female and 6 male participants, all lean and in good health. The subjects spent four days on each of the three diets, which were made as similar as possible in factors such as palatability, availability, variety, and appearance, and their intake was monitored.

According to Dr. Alison Gosby, "the results show that humans have a particularly strong appetite for protein, and when the proportion of protein in the diet is low this appetite can drive excess [energy intake](#). Our findings have considerable implications for bodyweight

management in the current nutritional environment, where foods rich in fat and carbohydrate are cheap, palatable and available to an extent unprecedented in our history."

More information: Gosby AK, Conigrave AD, Lau NS, Iglesias MA, Hall RM, et al. (2011) Testing Protein Leverage in Lean Humans: A Randomised Controlled Experimental Study. PLoS ONE 6(10): e25929. [doi:10.1371/journal.pone.0025929](https://doi.org/10.1371/journal.pone.0025929)

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