

Research Sheds Light On Why Protein-Rich Diets Aid Weight Loss

CHAMPAIGN, Ill. — As nutrition experts debate the ideal combination of protein, carbohydrates and fat that people should eat, new research explains for the first time how and why a moderately high protein diet may be the best for losing weight.

The new findings suggest that eating more high quality protein will increase the amount of leucine, an amino acid, in the diet, helping a person maintain muscle mass and reduce body fat during weight loss. Maintaining muscle during weight loss efforts is essential because it helps the body burn more calories.

While the body makes many other amino acids, it does not produce leucine, so people need to consume foods rich in it. Leucine is found primarily in high quality protein foods such as beef, dairy products, poultry, fish and eggs.

The findings of two related papers involving diets of in-

creased protein and reduced carbohydrates appear in the February issue of the Journal of Nutrition. Both studies were led by Donald K. Layman, professor of nutrition in the department of food science and human nutrition at the University of Illinois at Urbana-Champaign.

Layman, also a professor in the College of Medicine, tested his hypothesis on 24 mid-life, overweight women who consumed diets of 1,700 calories a day for 10 weeks. Physical activity of the participants was held constant.

The control group ate according to the USDA Food Guide Pyramid, consuming approximately 0.36 grams of protein and 1.3 grams of carbohydrates per pound of body weight per day.

Study group participants increased the amount of protein they ate daily to about 0.73 grams per pound of body weight and reduced their intake of car-

bohydrates to 0.95 grams per pound of body weight.

They also built their diets around high quality proteins, which provided the optimal level of leucine to improve body composition. Leucine has been shown to be a regulator of muscle, which is important to maintain when losing weight.

Layman cautions that it is a mistake to think about dietary protein as a percent of calories. "What is important about my plan," he said, "is that protein needs are based on body weight and not on a percent of the calories consumed."

The study group's daily diet consisted of nine to 10 ounces of meat, including at least seven beef meals per week, three servings of low-fat milk or cheese, and a minimum of five servings of vegetables. They also included two servings of fruit and four servings of grains, pasta and rice, and they ate in accordance with the National Choles-

terol Education Program's Step 1 heart-healthy guidelines.

Most of the public debate about diet continues to focus on the extremes of very high (Atkins' Plan) or very low (Ornish Plan) levels of proteins. Layman's plan falls within the protein range recently recommended by the National Academy of Sciences Food and Nutrition Board. The USDA Food Guide Pyramid falls at the low end of the accepted protein range.

In Layman's study, both diet groups lost a similar amount of weight, about 16 pounds, but the study group lost more body fat and less muscle mass than the control group. Those who fol-

lowed the moderately high protein diet lost two pounds more of body fat, yet maintained one pound more muscle mass than the control group.

The study challenges the conventional wisdom about the role of low-fat foods in weight loss, Layman said.

"Traditionally, people have built a diet around low-fat foods, instead of high quality protein foods. Study participants following the moderately high protein plan, which I call the 'Sensible Solution,' were twice as effective in maintaining lean muscle mass," he said. "Muscle helps burn calories, but is often compromised during weight loss."



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