

# Losing weight with a high-protein diet can help adults sleep better

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Wayne Campbell

Overweight and obese adults who are losing weight with a high-protein diet are more likely to sleep better, according to new research from Purdue University.

"Most research looks at the effects of [sleep](#) on [diet](#) and [weight](#) control, and our research flipped that question to ask what are the effects of weight loss and diet - specifically the amount of [protein](#) - on sleep," said Wayne Campbell, a professor of nutrition science. "We found that while consuming a lower calorie diet with a higher amount of protein, [sleep quality](#) improves for middle-age adults. This sleep quality is better compared to those who lost the same amount of weight while consuming a normal amount of protein."

These findings are published in the *American Journal of Clinical Nutrition*, which is affiliated with the American Society for Nutrition. The research was funded by Beef Checkoff, National Pork Board, National Dairy Council, Purdue Ingestive Behavior Research Center and National Institutes of Health.

A pilot study found that in 14 participants, consuming more dietary protein resulted in better sleep after four weeks of weight loss. Then, in the main study, 44 overweight or obese participants were included to consume either a normal-protein or a higher-protein weight loss diet. After three weeks of adapting to the diet, the groups consumed either 0.8 or 1.5 kilograms of protein for each kg of body weight daily for 16 weeks. The participants completed a survey to rate the quality of their sleep every month throughout the study. Those who consumed more protein while [losing weight](#) reported an improvement in sleep quality after three and four months of dietary intervention.

A dietitian designed a diet that met each study participant's daily energy need and 750 calories in fats and carbohydrates were trimmed per day while maintaining the protein amount based on whether they were in the higher- or normal-protein group. The sources of protein used in the two studies varied from beef, pork, soy, legumes and milk protein.

"Short sleep duration and compromised sleep quality frequently lead to

metabolic and cardiovascular diseases and premature death," said Jing Zhou, a doctoral student in [nutrition science](#) and the study's first author. "Given the high prevalence of [sleep problems](#) it's important to know how changes to diet and lifestyle can help improve sleep."

Campbell's lab also has studied how dietary protein quantity, sources and patterns affect appetite, body weight and body composition.

"This research adds sleep quality to the growing list of positive outcomes of higher-protein intake while losing weight, and those other outcomes include promoting body fat loss, retention of lean body mass and improvements in blood pressure," Campbell said. "Sleep is recognized as a very important modifier of a person's health, and our research is the first to address the question of how a sustained dietary pattern influences sleep. We've showed an improvement in subjective sleep quality after higher [dietary protein](#) intake during [weight loss](#), which is intriguing and also emphasizes the need for more research with objective measurements of sleep to confirm our results."

Campbell, whose expertise and research focuses on understanding how protein nutrition and exercise influence adults' health as they age, served as a member of the 2015 Dietary Guidelines Advisory Committee, which helped provide the scientific foundation for the nation's 2015-2020 [Dietary Guidelines for Americans](#).

**More information:** Higher-Protein Diets Improve Indexes of Sleep in Energy-Restricted Overweight and Obese Adults: Results from 2 Randomized Controlled Trials, *American Journal of Clinical Nutrition*, 2016.

Provided by Purdue University

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