

Elderly women may benefit from higher amounts of protein

March 25 2014, by Amy Patterson Neubert

(Medical Xpress)—Elderly women could benefit from consuming 29 percent more protein than the current nutrition guidelines recommend, according to new research from Purdue University.

"Our data suggests that the current dietary [protein](#) requirement estimate may be too low and reinforces that more research is needed to identify accurate protein amounts for [older adults](#)," said nutrition science professor Wayne W. Campbell, an expert on [dietary protein](#) and human health. "I think the current recommended dietary allowance values serve an important role in that they are the foundation that guides national and international feeding programs, but these findings, along with previous research, indicate that consuming amounts of protein moderately above the current recommended dietary allowance may be helpful."

The research, funded by the National Institutes of Health, is published in the current *American Journal of Clinical Nutrition*. The current recommended dietary allowance for women older than 70 years is 0.36 grams for each pound of body weight or 46 grams of protein for a 130-pound woman. This amount is the same for all women 19 and older.

"The current dietary reference intakes for elderly adults rely on data collected from younger people and extrapolated to include elderly people. Also, the scientific method used for the last 50 years to determine protein needs is not an ideal technique for older adults," said Campbell.

Campbell worked with the scientists who developed a new noninvasive method to evaluate protein amounts. These scientists are Rajavel Elango from the University of British Columbia; Paul B. Pencharz, University of Toronto; and Ronald O. Ball, University of Alberta. Also part of the team are former Purdue doctoral nutrition science student Minghua Tang, who is a research assistant professor at the University of Colorado, and George P. McCabe, professor of statistics and associate dean in Purdue's College of Science.

The indicator amino acid oxidation method has been used in children and young men, and this is the first time it was used in an elderly population. In this study, six women, ages 80 to 87 years, consumed beverages with 20 amino acids, the building blocks for high-quality proteins, including phenylalanine and tyrosine, on seven different testing days during the three-month study. The amounts of amino acids in the beverages were different each testing day and a tracer isotope was measured from their breath and urine samples collected periodically during each eight-hour testing period.

"When you don't have enough of these amino acids in your diet, your body will not be able to produce as much protein," Campbell said.

"When these women ate small amounts of the amino acids, the amount of carbon dioxide containing the tracer isotope was higher in their breath because the phenylalanine was being broken down instead of being used to make proteins. As the amounts of [amino acids](#) increased, the amount of carbon dioxide with the tracer was lower because their bodies were able to synthesize more proteins."

Determining the appropriate amount of protein for older adults to consume is especially important because they experience natural muscle loss, Campbell said. Losing muscle results in weakness and instability that can adversely affect daily physical abilities and increase the risk for falls.

"As people get older, they need fewer calories so they eat less food and they eat less protein," Campbell said. "The proportion of calories with protein stays constant unless you dramatically change eating habits, which few people do. More research is needed to determine the best amount of protein for people older than 70 to consume to help retain their functional abilities and health."

More information: "Assessment of protein requirement in octogenarian women with use of the indicator amino acid oxidation technique." Minghua Tang, George P. McCabe, Rajavel Elango, Paul B. Pencharz, Ronald O. Ball, and Wayne W. Campbell *Am J Clin Nutr* March 2014 ajcn.042325. [ajcn.nutrition.org/content/ear ...
.112.042325.abstract](http://ajcn.nutrition.org/content/ear...112.042325.abstract)

Provided by Purdue University

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