



COMMENTARY

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Why dietary-protein intake matters

Clinicians can greatly improve the health of their patients as well as themselves simply by ensuring dietary protein intake meets recommended levels of 15% to 35% of caloric intake. Ample calorie intake from other macronutrients—carbohydrates and fats—allows protein to be spared for its important roles in lean body mass preservation, hormone and antibody synthesis, and blood acidity and bone health maintenance, among other actions.

Consumers are looking for protein when shopping for food, according to the International Food Information Council Foundation's *2013 Food & Health Survey* (available at <http://bit.ly/14F02yU>;

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accessed December 15, 2013). The majority of 576 respondents reported seeking protein in their food and beverage choices for energy, strength, and satiety (p. 49). However, consumers are inclined to believe that children and teens get the greatest benefit from higher protein intake, and that persons aged 55 years and older benefit the least (p. 48). But because muscle synthesis declines with age, adequate protein intake is essential for aging adults, who need this nutrient to defend their health through immune response to infection or to heal from injury.

Yet protein is indeed especially important during periods of growth, such as infancy and the teenage growth spurt, when nitrogen demands are particularly high. Additionally, for athletes, the nitrogen supply that only protein-rich foods offer encourages muscle synthesis and body-tissue repair, vital for strengthening muscles. For persons struggling with weight management, a higher ratio of protein to carbohydrates can reduce hunger for longer periods following meals, making it easier to resist the temptation to snack (*Am J Clin Nutr.* 2013;97[4]:677-688; available at ajcn.nutrition.org/content/97/4/677.full.pdf+html, accessed December 15, 2013).

Protein is vitally important for wellness among those requiring medically prescribed bed rest. For aging adults, bed rest or acute inactivity during hospitalization or a disease state poses a potent threat to muscle tissue and functional

capacity. After the age of 30, adults lose 3% to 8% of their muscle mass per decade. Over time, the loss of lean tissue contributes to decreased muscle strength and power, which are important predictors of balance, falls, and mortality. Sarcopenia is highly prevalent in America: More than 50% of adults aged 80 years and older (and approximately 20% of adults older than age 70 years) can be characterized as sarcopenic. With advancing age, even a brief period of bed rest is increasingly likely to initiate a serious decline in muscle strength and functional capacity, from which full recovery is often unattainable.

Researchers have found the following steps can have a great impact on limiting loss of muscle mass and function: 1) Consume a moderate amount (25 g to 30 g) of high-quality protein, such as milk, yogurt, eggs, fish, soy isolates, poultry, or meat, with each meal. 2) Consume protein shortly after exercising. 3) Combat the accelerated loss of muscle mass and function during acute catabolic crises including fever, burns, or other trauma and limited periods of physical inactivity with targeted amino acid supplementation (*Curr Opin Clin Nutr Metab Care.* 2010;13[1]:34-39). Suggestions of easy ways to incorporate protein into the daily diets of young children, young adults, women, and baby boomers can be found at www.foodinsight.org (input "protein fact sheets" into the search function available at that website). ■