

Nutrition Update: Dietary Protein

Sharon M. Fruh, PhD, and Marcia D. Greenblum, MS, RDN

ABSTRACT

Dietary protein is a trendy topic in the news. Providers need to encourage individuals to consume healthy sources of dietary protein. Including protein at breakfast and at snack time is a way to help promote satiety and curb the intake of less nutrient-rich foods. Extra dietary protein is needed during periods of growth (childhood/adolescence), pregnancy/lactation, intense physical training, disease states, and frailty associated with aging. The middle-aged and elderly adult can help prevent sarcopenia and osteoporosis by including protein at every meal, remaining physically active, and incorporating sources of calcium and vitamin D.

Keywords: appetite regulation, dietary protein, osteoporosis, protein needs, sarcopenia, timing of protein intake

© 2014 Elsevier, Inc. All rights reserved.

Nurse practitioners (NP) are on the front lines when it comes to educating patients regarding healthful dietary choices. Diet-related diseases are at an all-time high. Overweight and obesity are at epidemic rates. Like never before, NPs need to work with registered dietitians to help patients achieve a healthful diet. An NP's education may not have included extensive dietary training, but an NP is often required to provide dietary expertise to patients.

Dietary protein has become a trendy topic in the news. Providers need to be knowledgeable regarding dietary protein. The goal of this article is to provide the busy practitioner with information related to dietary protein. Printable patient handouts and dietary recommendations for patients across the life span are also provided. Feel free to make copies of the handouts for your patients.

AMERICANS HAVE QUESTIONS REGARDING PROTEIN INTAKE

Americans have many questions regarding dietary protein. The International Food Information Council Foundation (2013) surveyed 1,000 Americans, ages 18-82 years, about what they consider when they purchase packaged food or beverages, and 63% responded that they are looking for protein.¹ In fact, 57% of respondents identified that they are trying to

get a certain amount or as much protein as possible. The quest for protein ranked in the top 3 for diet desirability after fiber and whole grains. This interest in protein correlates with the surge in media attention to protein powders, shakes, and supplements that are widely promoted and often consumed in large quantities. The consumption of protein in large quantities may create an excessive burden on the poorly functioning liver and kidneys to metabolize and excrete the excess waste products (ie, ammonia and urea).² Individuals often rely on health care providers to clarify dietary protein information that they have read or seen through media advertisements. Therefore, NPs are in a perfect position to correct misperceptions and relate the importance of including dietary protein in a healthful diet.

WHAT IS THE RECOMMENDED DIETARY ALLOWANCES FOR PROTEIN?

Providers are often asked questions about dietary recommendations such as, "How much protein should I eat?" Before that question is answered, it is important to know that the recommended dietary allowances (RDAs) are set by Institute of Medicine's Food and Nutrition Board and are based on preventing deficiency in healthy adults, which can be different from promoting optimal health. The RDA of 0.8 g/kg/d is defined as the amount of protein that

would satisfy the needs of almost all (98%) of the population.³ This does not take into account the source of the protein; its quality, which reflects its amino acid content; the individual's level of activity; or their distribution of protein intake over the day.

WHAT PERCENTAGE OF PROTEIN NEEDS TO BE INCLUDED IN OUR DAILY DIET?

In addition to the RDA, the Food and Nutrition Board also sets an acceptable macronutrient distribution range, which is the range of intake for a particular energy source that is associated with reducing the risk of chronic disease while providing intakes of essential nutrients. For protein, the range of intake is generally between 10% to 35% of total calorie intake for adults.⁴ This percentage of daily protein is thought to confer benefits beyond the level of preventing deficiency. Protein needs vary according to age and activity level (Table 1).

WHEN IS EXTRA PROTEIN NEEDED?

Overall, in the general US population, protein intake may exceed the RDA requirement.⁴ However, there are conditions that may require extra dietary protein such as periods of growth (childhood/adolescence), pregnancy/lactation, intense physical training, disease states, and frailty associated with aging.² It is not recommended to encourage a diet high in protein and low in other nutrients. Protein intake above the required amount that is not used efficiently by the body will be stored as body fat in adipose tissue. The risk of adverse effects from excess protein intake from foods is very low; therefore, no upper level of intake for protein or for any of the amino acids has been

established by the Institute of Medicine. However, high levels of amino acid intake from dietary supplements may pose an excess burden on the liver and kidneys required to metabolize and excrete the excess waste products (ie, ammonia and urea).²

TIMING OF PROTEIN INTAKE IS IMPORTANT

The International Food Information Council Foundation (2013) survey found that consumers are not particularly concerned about what time of day they consume protein.¹ The survey revealed that 47% indicated that it did not matter what time of day they took in the protein just as long as it was enough. However, 44% identified that the time of day they consumed protein did matter. These individuals were younger and college educated. This may reflect their awareness of research identifying protein's function in promoting muscle synthesis when consumed within 30 minutes of a meal. However, evidence has identified dietary protein needs to be present, adequate, and evenly distributed at every meal.^{5,6} This is especially true with older adults who are unable to maintain a high efficiency of protein use for nitrogen retention from 1 large protein meal per day. Because the quality and quantity of protein consumed at each meal is important for older adults to maintain muscle mass, it is critical to encourage them to have adequate protein at every meal.^{5,6}

QUALITY OF PROTEIN IS IMPORTANT

Providers need to encourage healthy sources of protein. Low-fat protein sources that are baked, grilled, or stewed are considered healthier because they provide fewer excess calories. An example of healthy protein sources include the following:

Table 1. Protein Needs Based on Calorie Needs by Sex, Age, and Activity Level

Age	Adult Males' Calorie Needs, g			Adult Females' Calorie Needs, g		
	Sedentary	Moderately Active	Active	Sedentary	Moderately Active	Active
21-30 y	60-210	68-236	75-263	48-149	53-184	60-210
31-50 y	60-210	65-228	65-228	45-158	50-175	55-193
50-70 y	55-193	60-210	60-210	40-140	45-158	53-184
> 70 y	50-175	55-193	55-193	40-140	45-158	50-175

Note: Calculations based on RDAs and the 2010 Dietary Guidelines for Americans.²²

Download English Version:

<https://daneshyari.com/en/article/2663679>

Download Persian Version:

<https://daneshyari.com/article/2663679>

[Daneshyari.com](https://daneshyari.com)