

Reexamining Protein Needs for Optimal Health: New Studies Ask, "How Much and How Often?"

Research Highlights:

- **“Evidence that protein requirements have been significantly underestimated”**
 - Current recommendations for protein intake are based on the minimum amount of protein required to prevent amino acid deficiency. A new study has reexamined the data using a new and more accurate measurement method and suggests that protein requirements in adult men are significantly higher than current recommendations suggest.
 - In the population studied, adult protein requirements were found to be approximately 50 percent higher than the current RDA and suggest an urgent need to re-assess recommendations for protein intake.
- **“A moderate serving of high-quality protein maximally stimulates skeletal muscle protein synthesis in young and elderly subjects”**
 - In a separate study, researchers suggest that instead of consuming a single, large protein-rich meal, protein intake should be evenly distributed across all three meals to help optimize steady protein synthesis throughout the day, which is important for muscle growth and maintenance.
 - This study also suggests that older patients receive the same benefit as young patients from consuming four ounces of lean beef at each meal, indicating that dietary interventions can prevent sarcopenia, or the age-related loss of lean muscle mass, which can contribute to a diminished quality of life.

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Dear Colleague,

Despite the common assumption that most people are over-consuming protein, findings from a newly published research study indicate that protein needs may be far greater than current recommendations.

The [research](#), published in the January 2010 edition of *Current Opinion in Clinical Nutrition and Metabolic Care*, reexamined data from existing nitrogen balance studies using a new, more accurate method, dubbed the indicator amino acid oxidation technique (determines the availability of amino acids for protein synthesis), to establish actual protein requirements. Using this new analysis method, the study found actual protein requirements in adult men to be approximately 50 percent higher than current Recommended Dietary Allowance (RDA) recommendations (1.2 g/kg/d compared to the current RDA of 0.8 g/kg/d). The study authors suggest an urgent need to reassess recommendations for protein intake.

While determining the appropriate amount of protein is paramount, it's also important to consider when and how protein is being consumed. In the typical American diet, protein is often consumed in one sitting as part of the evening meal. However, another new research study suggests that changing this pattern may be a key component to achieving steady protein synthesis throughout the day, which is essential for muscle growth and maintenance, and in the case of the older people, preventing sarcopenia.

This additional study, titled “A Moderate Serving of High-Quality Protein Maximally Stimulates Skeletal Muscle Protein Synthesis in Young and Elderly Subjects,” and published in the *Journal of the American Dietetic Association*, examined whether varying the portion size of a protein-rich food, specifically lean beef, had an effect on muscle protein synthesis in all patients regardless of age.

"In young and old adults, we saw that 12 ounces gave exactly the same increase in muscle protein synthesis as 4 ounces," said associate professor Douglas Paddon-Jones, PhD, senior author of the paper. "This is good news for the aging population that may have difficulty eating large meals. This data indicates they can consume a moderate amount of protein (4 oz) at one meal and still get the same benefit, as long as they're consuming steady amounts of protein over the course of the day. I think this has a lot of application for how we design meals and make menu recommendations for both young and older adults."

I invite you to review the [research](#) and you may also be interested in the following fact sheets, which provide additional information about the health benefits of high-quality protein as well as tips for incorporating moderate amounts of protein into the diet throughout the day. Please click on the links below to access the fact sheets:

- [Beef Up with Lean Protein](#)
- [Powering Up with Protein](#)
- [High-Quality Protein Promotes Optimal Health](#)
- [Lean Protein Can Help People Live Well and Age Vibrantly](#)

I hope you find this information helpful as you're counseling patients. If you have any questions as you review the materials, or for more information, please feel free to contact Katie Hayes at katie.hayes@edelman.com or 312-240-2690.

Thank you,

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The Beef Checkoff through the
National Cattlemen's Beef Association