



# GET LEAN WITH PROTEIN

Protein can have a beneficial role in weight loss and management, and in optimizing muscle strength and metabolism associated with physical activity. The amount, quality and timing of protein intake are important factors in improving the body's ability to feel satisfied longer, achieve a healthy weight, and build and retain muscle mass.

## The Power of Protein

Many Americans could benefit from adding high-quality protein to their diets because of its positive role in weight management, muscle maintenance and disease prevention.<sup>1-4</sup>

- The Institute of Medicine recommends protein intake at 10-35% of total calories for adults, or 50-175 grams of protein per day for a 2,000 calorie diet.<sup>5</sup>
- The Recommended Dietary Allowance (RDA) for protein (0.8 g/ kg/day for adults) is set at the lower end of this range.<sup>5</sup>
- Most adults only get 16% of their daily calories from protein, which includes protein from all food groups.<sup>5,6</sup>



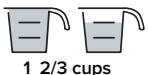
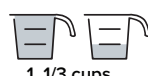

- On average, Americans (age 2 years and older) consume 5.7 ounces from the Protein Foods group each day (meat, poultry, eggs, fish/seafood, nuts, seeds and soy products), which is at levels consistent with the 2015-2020 Dietary Guidelines for Americans.<sup>7</sup>

A growing body of evidence indicates that eating a higher-protein diet, between 1.2 and 1.6 grams per kilogram of body weight per day with at least 25-30 grams of a high-quality protein at each meal, may help maintain muscle mass and maximize optimal health.<sup>2,8-10</sup> In addition, eating enough protein-rich food is essential to help protect lean body mass and prevent the loss of muscle and strength associated with aging, and it may play a role in reducing risk for type 2 diabetes and cardiovascular disease.<sup>1,4,9-11</sup>

## Understanding High-Quality Protein

When it comes to choosing protein, not all food sources are created equal. Animal proteins, such as lean beef, provide complete high-quality protein that contains all the essential amino acids the body needs for optimal health. To get the same amount of protein as beef, one would have to consume 1½ to 2 times more calories from most plant protein foods, such as beans, nuts and grains. Lean beef is also a top source of readily absorbable iron and zinc and an excellent source of vitamin B<sub>12</sub>, an essential nutrient not naturally available in plant protein sources.<sup>12-13</sup>

## WHAT DOES 25 GRAMS OF PROTEIN LOOK LIKE?<sup>13</sup>

	AMOUNT	CALORIES	PROTEIN
Quinoa	 3 cups	666	25g
Peanut Butter	 6.5 tbsp	613	25g
Black Beans	 1 2/3 cups	379	25g
Edamame	 1 1/3 cups	249	25g
Beef	 3 ounces	173	25g

## Protein Satisfies

When it comes to satiety, or feeling satisfied after eating, protein has more staying power than carbohydrates and fat, helping to curb hunger and the desire to eat.<sup>2,14-17</sup> Consuming a high-protein meal (containing at least 25-30 grams of protein), particularly at breakfast, leads to improved appetite control and satisfaction throughout the day, which could help combat obesity.<sup>18</sup> In fact, individuals who followed a high protein diet (about 30% of daily calories from protein) complained less often about hunger and felt more satisfied compared to a typical diet.<sup>18</sup> In addition, equal distribution of protein intake throughout the day (approximately 30 grams of protein at each meal) supports muscle protein synthesis and maintenance, increased satiety and, when protein is consumed at breakfast, reduced hunger and cravings later in the day.<sup>8,17,18</sup>

## Protein Preserves Muscle and Fuels Fat Loss

High-quality protein can help maintain a healthy weight, sustain weight loss, and keep a favorable body composition over time.<sup>2,3</sup> The essential amino acid leucine, present in complete proteins like beef, interacts with insulin and glucose metabolism to promote skeletal muscle growth and may be beneficial for weight loss and maintaining muscle.<sup>4,19</sup> In fact, consuming an energy-restricted diet with a higher ratio of protein to carbohydrate may help people lose more fat mass compared to conventional diets,<sup>20</sup> and help to lower waist-to-hip ratio by reducing abdominal fat.<sup>21</sup> Compared to other weight loss approaches, increasing lean protein intake may be more effective because it helps to increase satiety and preserve lean muscle.<sup>2</sup>



## Protein Boosts Benefits of Physical Activity

Physical activity is more effective when paired with a protein-rich diet.<sup>22,23</sup> It is well known that protein consumed after exercise provides the amino acids necessary for muscle repair and recovery, helping to stimulate further muscle synthesis.<sup>23</sup> Evidence also suggests that a protein-rich diet combined with resistance exercise helps adults become more toned by helping them lose fat and maintain muscle mass.<sup>22,23</sup> In

a weight loss study that included cardio and strength training exercise sessions, researchers compared individuals who followed a protein-rich diet (about 30% of calories from protein) with those who consumed a diet with higher amounts of carbohydrates (about 15% of calories from protein). Those who followed a combined protein-rich diet and exercise program experienced weight loss (mostly fat mass), compared to the subjects in a high-carbohydrate and exercise group, in which 25-30% of the weight loss was from muscle.<sup>22</sup>

### Recipe for a Lean Protein Meal

#### Grilled Beef Tri-Tip with Tropical Fruit Salsa

Servings: 4

##### Ingredients:

1 beef Tri-Tip Roast (1-1/2 to 2 pounds)

##### Lime-Honey Glaze:

2 tablespoons honey  
2 tablespoons fresh lime juice  
2 teaspoons ground cumin  
1 teaspoon dry mustard  
1 teaspoon salt

##### Tropical Fruit Salsa:

1½ cups diced papaya or mango  
½ cup diced plum tomatoes  
2 jalapeño peppers, seeded, finely chopped  
2 tablespoons sliced green onion  
2 tablespoons fresh lime juice  
1 tablespoon chopped fresh cilantro or parsley  
1 tablespoon honey

##### Instructions:

1. Combine glaze ingredients in small bowl.
2. Place roast on grid over medium, ash-covered coals or over medium heat on preheated gas grill. Grill; covered 25 to 35 minutes for medium rare to medium doneness, turning occasionally. Brush with glaze twice during last 10 minutes.
3. Meanwhile, combine salsa ingredients in medium bowl. Refrigerate until ready to serve.



4. Remove roast when instant-read thermometer registers 135°F for medium rare; 150°F for medium. Tent loosely with aluminum foil; let stand 10 minutes. (Temperature will continue to rise about 10°F to 145°F for medium rare; 160°F for medium.) Carve across the grain into thin slices. Serve with salsa.

**Nutritional information per serving:** 245 Calories; 8g Total Fat; 3g Saturated Fat; 4g Monounsaturated Fat; 66mg Cholesterol; 443mg Sodium; 21g Total carbohydrate; 24g Protein; 2.5mg Iron; 9.6mg Niacin; 0.5mg Vitamin B6; 1.3mcg Vitamin B12; 4.3mg Zinc; 27.5mcg Selenium; 1.6g Fiber

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Funded by Beef Farmers and Ranchers