

BEEF
IT'S WHAT'S FOR DINNER.®

Why Protein Quality Matters

Protein is an essential part of a healthy diet. When it comes to the type of protein we select on a day-to-day basis, are all sources of protein created equal? Not necessarily...

To understand the differences between various protein sources, we first have to understand the very basics of dietary protein and how it works in our bodies:

PROTEIN BASICS

Proteins are made up of building blocks called amino acids. There are 20 unique amino acids, 9 of which are essential amino acids, and must come from the foods we eat. Our bodies are able to create the other 11 amino acids we need using elements already present in the body. These are called *nonessential amino acids*.

PROTEIN QUALITY

Different measurement scales are used to rate the quality of protein in different foods.⁴ These measurements usually look at two things:

1. How many essential amino acids are present in the protein (remember, those are the building blocks that we *need* to get from a healthy diet).
2. The body's ability to digest and use the protein from the food source (this is referred to as *bioavailability*).

A well-balanced diet that includes a variety of protein foods will ensure your athlete is getting enough to meet his or her needs.






■ **ANIMAL PROTEINS:** The protein found in beef, fish, poultry, eggs, and milk generally have the highest protein quality - these are considered complete protein sources - they contain all 9 essential amino acids and are easy to digest.¹ In addition, animal proteins are optimal in their ability to help the body build and maintain muscle.²

■ **PLANT PROTEINS:** The protein from plant sources often scores lower in protein quality because most plant-based proteins are incomplete, meaning they are lacking one or more of the essential amino acids (with soy and quinoa being notable exceptions).¹ While the fiber in plants can support our health in many ways, dietary fiber along with other components can interfere with how the body absorbs and digests amino acids.³ Research shows that plant-based proteins are less effective than animal proteins in supporting muscle growth and maintenance.⁵

FEELING FULL YET?

Studies tell us that eating high-quality, whole food proteins can help us to feel full and satisfied and help us feel less hungry between meals.^{4,5,6} A 3 oz serving of cooked lean beef (about the size of a deck of cards) packs a powerful punch of high-quality protein with a reasonable number of calories. Keeping a target of 20-30 grams of protein per meal in mind, take a look at how some plant-based protein foods compare to one 3 oz serving of cooked beef.

WHAT DOES 25 GRAMS OF PROTEIN LOOK LIKE?⁷

	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

Compared to plant-based protein sources, lean beef provides more high-quality protein with fewer calories. On the other hand, plant-based protein foods may provide dietary fiber and other vitamins and minerals that animal-based protein foods do not! Variety is the name of the game. Including lean beef as part of your balanced, healthy lifestyle is something you and the whole family can feel good about!

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