

The Promise of Protein from Dairy Foods

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We can all agree that a diet with quality protein is a must for our health, growth and overall wellness. Dairy protein is one of the highest quality protein sources available to consumers.

The Importance of Protein

Our bodies cannot grow, develop, or repair themselves without a good source of protein from the foods we eat. This is particularly true for growing children. Protein is the building block of all growth, including organs such as the brain, muscle, and bone. It's a key nutrient for height growth and overall physical development in children.

Protein is made up of amino acids. We need a range of amino acids for our bodies to function well. For example, amino acids are involved in metabolism, body growth and development, skin turnover, appetite regulation, and athletic performance and recovery.

Our bodies can make some of the amino acids it needs, but a few of them can only be obtained from food. These are the essential amino acids. Some foods, like dairy products, are complete protein sources. They provide the nine

essential amino acids our bodies cannot make. Most plant-based proteins are incomplete. They're missing at least one essential amino acid.

We need to consume daily food sources of high quality protein in order to get the essential amino acids we cannot make on our own. A high quality protein supplies these essential amino acids, and is easy for the body to digest, absorb and utilize. Including dairy foods as part of a healthy eating pattern provides high quality protein for both children and adults.

What Are the Dairy Proteins?

If you remember the nursery rhyme, Little Miss Muffet, you've heard about dairy protein. Miss Muffet was "eating her curds and whey," a reference to the major proteins found in dairy: casein and whey.

About 80% of the protein in dairy is

casein. Casein protein is digested and released slowly into the bloodstream over a period of several hours. Casein is also where we get much of the calcium found in dairy products.

Whey protein makes up the rest of the protein in dairy foods, or about 20%. Whey is rapidly digested and makes its way into the bloodstream quickly. Studies show this quick entry into the blood spikes muscle growth and strength.

Whey is unique in that it has the highest leucine content of all protein sources. As such, it's used in baby formulas, nutritional supplements, and in sports products.

Both casein and whey are associated with increasing total body protein content, muscle building and strength, improved recovery after exercise, appetite regulation, blood sugar control, weight maintenance, and several other health benefits. Athletes may take casein and/or whey powders as a protein supplement to improve athletic performance.

The good news is that dairy foods naturally offer both casein and whey along with other important nutrients for health such as calcium, magnesium, potassium, zinc, vitamin D, vitamin A, and phosphorus.

In fact, the authors of a 2020 study in Osteoporosis International state, "the dairy matrix exerts an effect on bone and muscle health that is more than the sum of its nutrients, and we suggest that whole foods, not only single nutrients, need to be assessed in future observational and intervention studies of health outcomes."

How Much Protein Is In Dairy Foods?

Most dairy foods contain protein, but this varies based on the production techniques used. For example, Greek yogurt is strained more times than regular yogurt, making it more concentrated in protein.

Here are some dairy foods and an estimate of their protein content.

FOOD	SERVING SIZE	PROTEIN CONTENT*
Whole Milk	1 cup	8g.
Lowfat Milk (1%)	1 cup	8g.
Skim Milk	1 cup	8g.
Chocolate Milk	1 cup	8g.
Yogurt <small>WHOLE MILK PLAIN</small>	1 cup	8.5g.
Greek Yogurt <small>WHOLE MILK PLAIN</small>	1 cup	22g.
Skyr (Icelandic Yogurt)	1 cup	25g.
Cottage Cheese <small>LOWFAT</small>	1 cup	25g.
Cheddar Cheese	1" cube	4g.
Mozarella Cheese <small>PART-SKIM</small>	1c. shredded	27g.
American Cheese <small>REDUCED FAT</small>	1 slice	3-4g.
Ice Cream <small>VANILLA</small>	1 cup	4-5g.
Butter <small>STICK</small>	1 tbsp.	0.1g.

*Values obtained from FoodCentral Data, available at <https://fdc.nal.usda.gov/error.html>

Healthy Eating Patterns with Dairy Protein

Adding dairy protein can be an effective way to meet those essential amino acids needed for our health. Whether you're an omnivore or a vegetarian, dairy foods can contribute a

quality protein source as well as other important nutrients.

For young children, the 2020 Dietary Guidelines for Americans recommend dairy is included as part of a healthy vegetarian eating pattern through the second year of life. For older children and adults, consuming 3 servings of dairy foods daily will help meet nutrient requirements for health.



KEY TAKEAWAYS

Protein is essential for our bodies overall health, growth, and wellness.

The amino acids found in protein ensure the proper functioning of our brain, muscle, and bones.

While some amino acids can be made by our bodies, other can only be obtained from foods like dairy.

Dairy provides nine essential amino acids our bodies cannot make.

Casein and whey are the two major proteins found in dairy.

In addition to building muscle and strength, casein and whey can help to regulate appetite, assist in controlling blood sugars, and aid in weight maintenance.

Dairy is a quality source for protein as well as other important nutrients.

References

2020 Dietary Guidelines: <https://www.dietaryguidelines.gov/>

FoodCentral Data: <https://fdc.nal.usda.gov/error.html>

Food Insight: <https://foodinsight.org/the-power-of-protein-dairy/>

Today's Dietitian: <https://www.todaysdietitian.com/newarchives/030413p26.shtml>

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