



## Nutrition Spotlight: U.S. Dairy Proteins for Healthy and Active Lifestyles



U.S. whey proteins are well-known as a key component of training regimens for professional athletes and gym enthusiasts. Today, broader consumer groups including sports enthusiasts, seniors as well as health-minded and weight-conscious adults also are discovering the benefits of protein diets as part of an overall healthy, active lifestyle. Incorporating high-quality U.S. milk and whey proteins into foods and beverages regularly consumed throughout the day can help consumers attain higher-protein diets while maintaining a healthy weight, curbing hunger and enhancing exercise recovery.

### U.S. Dairy Proteins: Smart Protein Choice

Dietary guidance around the world tends to focus on the amount of protein required to prevent nutritional deficiencies. However, beyond protein quantity, the benefits of proteins for human health can be optimized by also paying attention to protein quality as well as protein intake timing.

#### DID YOU KNOW

- Naturally found in dairy, U.S. whey and milk proteins are high quality and complete with all of the essential and nonessential amino acids the body needs.
- Research demonstrates that U.S. whey protein may benefit weight management, body composition, muscle health, post-exercise recovery, healthy aging and more.
- There are three important factors when choosing protein: amount, quality and timing. Aim for 20 to 30 grams of high-quality protein at each meal.

High-quality U.S. dairy proteins are an optimum choice to fuel active lifestyles and help people reach their goals faster:



Curb hunger — Calorie for calorie, whey protein can help people feel fuller longer than carbohydrates or fats.<sup>10-13</sup>



Get lean — Consuming whey protein and performing regular resistance exercise can help build more lean muscle compared with resistance training alone or resistance training combined with carbohydrate consumption.<sup>14-19</sup>



Enhance exercise recovery — Consuming whey protein in proximity to exercise helps to build and repair muscle.<sup>14,26,27</sup>



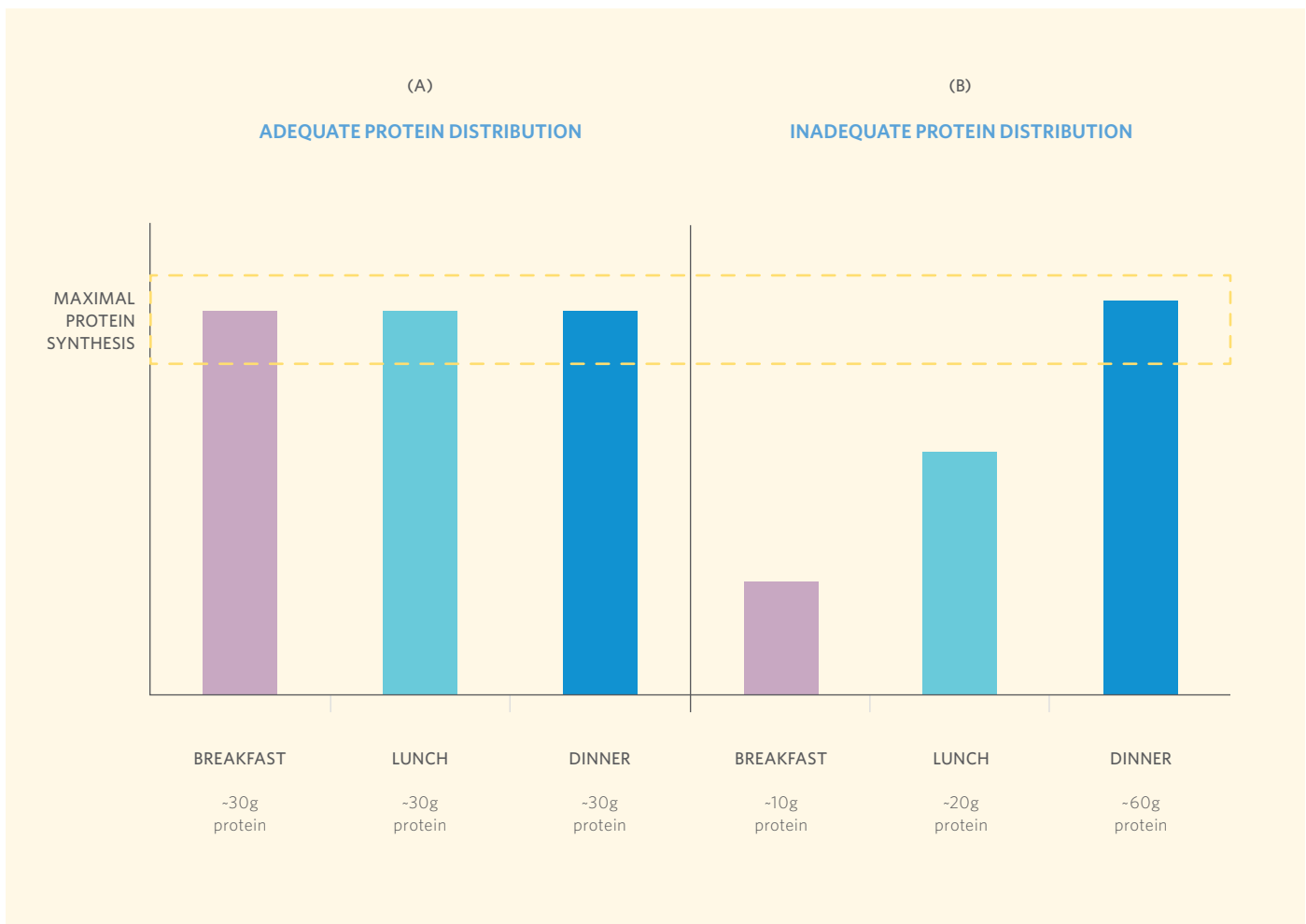
Help maintain muscle — Consuming more high-quality protein and engaging in regular exercise can help people maintain muscle mass as they age, which may allow for a more active lifestyle.<sup>20,21</sup>



Maintain a healthy weight — A reduced-calorie, higher-protein diet including whey protein may improve the quality of weight loss by helping people lose more fat and/or maintain more lean muscle.<sup>1-9</sup>

## Fitting in More Dairy Protein: Balancing Timing and Quantity

The key to optimizing the benefits of U.S. whey and milk proteins is to understand how much and when they should be consumed. Recent research indicates that people should balance their protein intake throughout the day to maximize health and wellness benefits;<sup>22-25</sup> there is an upper limit to the amount of protein that can be absorbed or used by the body at one time. Aiming for 20 to 30 grams of high-quality protein per meal<sup>22,23,24</sup> is a good rule of thumb to ensure the benefits of a protein are maximized. Attention also should be paid to protein intakes after exercise; research shows that consuming 20 grams of whey protein post-exercise can increase muscle protein synthesis (MPS) in healthy adults.<sup>26,27</sup>



Source: Paddon-Jones D, Rasmussen BB. Dietary protein recommendations and the prevention of sarcopenia: Protein, amino acid metabolism and therapy. *Curr Opin Clin Nutr Metab Care.* 2009;12(1):86-90.



There are easy ways to add more protein to meals throughout the day.



BREAKFAST

Enjoy Greek yogurt and top with nuts and fruit.



LUNCH

Add a fruit smoothie that contains whey protein.



SNACK

Grab a nutrition/energy bar made with whey or milk protein.



DINNER

Stir whey protein into soups to complement the meal.



## THE RESEARCH

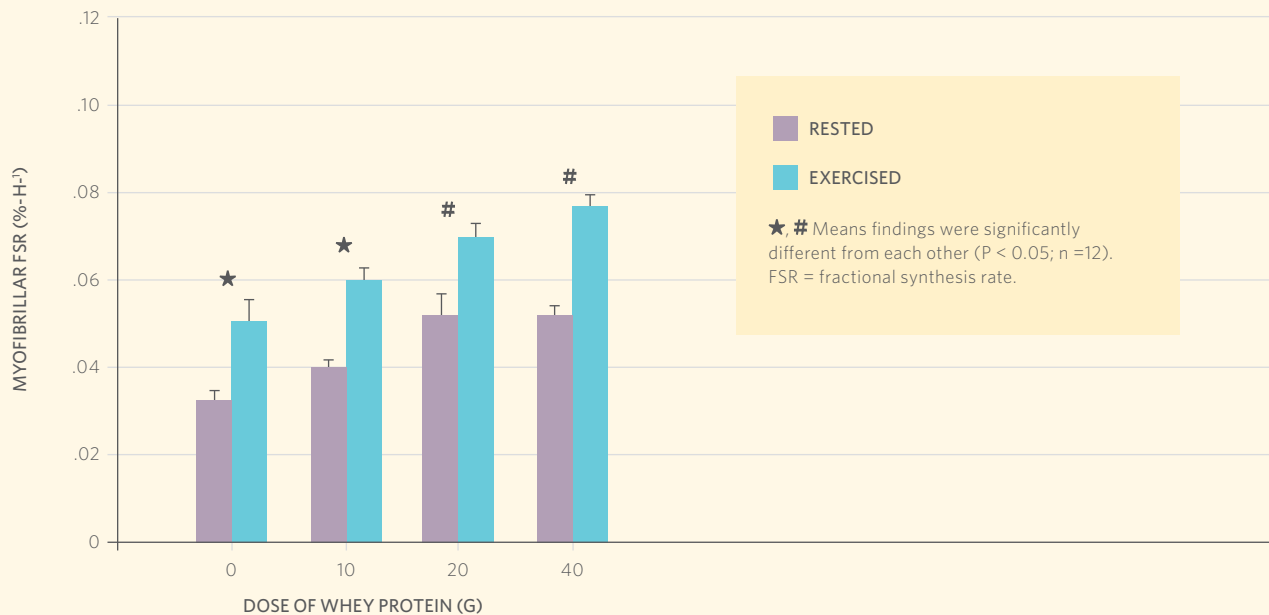
# Achieving Muscle Gains and Hunger Control With High-quality Dairy Protein

The International Olympic Committee Consensus Statement on Sports Nutrition states, "Foods or snacks that contain high-quality proteins should be consumed regularly throughout the day as part of the day's total protein intake, and in particular soon after exercise, in quantities sufficient to maximize the synthesis of proteins, to aid in long-term maintenance or gain of muscle and bone and in the repair of damaged tissues. Ingestion of foods or drinks providing 15-25 g of such protein after each training session will maximize the synthesis of proteins that underpins these goals."<sup>28</sup>

## A Closer Look at the Science

### MAXIMIZING MUSCLE PROTEIN SYNTHESIS

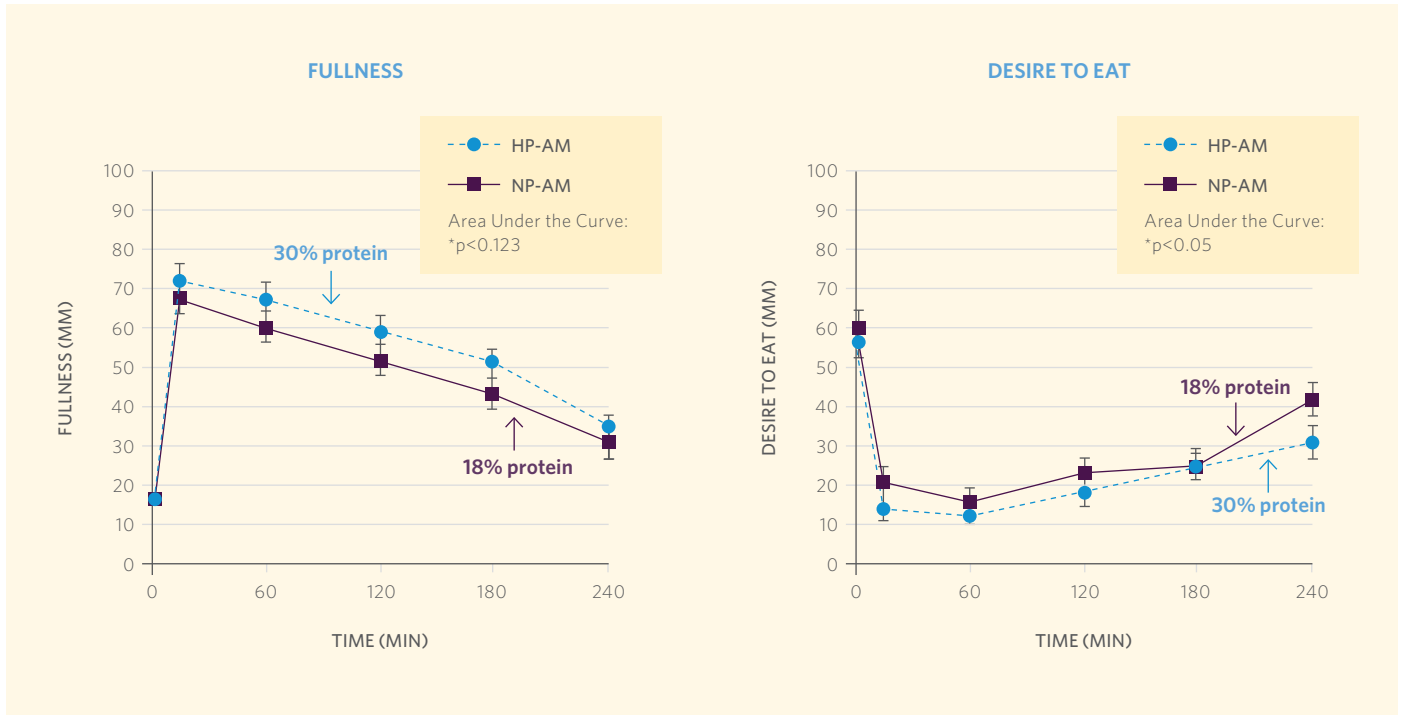
Research shows that consuming 20 grams of whey protein at rest and after exercise can maximize MPS.



Forty-eight resistance-trained young men consumed a high-protein breakfast and, three hours later, performed an intense, one-legged resistance exercise session. Immediately after exercise, subjects consumed a protein beverage containing 0, 10, 20 or 40 grams of whey protein isolate. After measurements were made, it was shown that 20 grams of whey protein maximized MPS at rest and following resistance exercise.<sup>26</sup>

### CONTROLLING HUNGER

Higher-protein diets have been shown to improve perceptions of fullness and reduce the desire to eat when calories are restricted, which may help achieve better results when trying to lose weight.



Thirty-eight women consumed a 750-kilocalorie per day energy-deficit diet with a protein content of 30 percent (higher-protein diet) or 18 percent (normal-protein diet) for nine weeks. On separate days, metabolic, appetite and hormonal responses were measured over four hours when the women consumed a higher-protein diet or a normal-protein diet. Results showed that higher-protein diets improved perceptions of satiety and pleasure when consuming fewer calories.<sup>29</sup>



GET IN TOUCH

### Looking for more information on dairy proteins?

While the U.S. Dairy Export Council® (USDEC) does not manufacture or sell dairy products, we proudly support the people who do. Search [ThinkUSAdairy.org/Nutrition](http://ThinkUSAdairy.org/Nutrition) for more information on the health and nutritional benefits of U.S. dairy proteins.

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To learn more and find a USDEC representative near you, go to [ThinkUSAdairy.org/global-presence](http://ThinkUSAdairy.org/global-presence).