

Protein-based Functional Beverages

One organization offers studies pointing to the role that proteins, particularly whey proteins, can play in the functional beverage market for women and Baby Boomers.

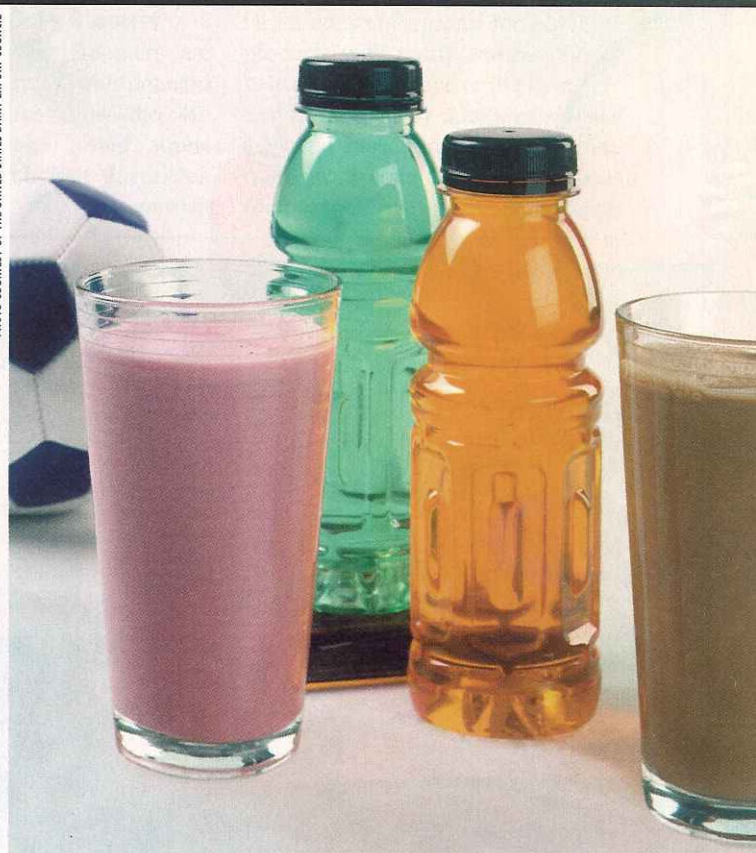
Shannon Koski, U.S. Dairy Export Council

A well-documented obesity epidemic¹ and a tough economy have forced many U.S. consumers to examine the cost and nutritional value of their food and beverage purchases. The rising obesity rate in the U.S. provides direct and poignant evidence of how difficult it is for Americans to follow through on their desire to maintain a healthy, balanced diet. This challenge, however, is an important factor for the functional beverage market, as 38% of respondents to a 2009 Mintel survey viewed functional beverages as a way to make up for a less-than-healthy diet.²

The booming \$8.6 billion functional beverage market is set to grow another estimated 19% by 2014, according to the Mintel report. While the health and economic issues at hand impact a staggering proportion of this country's population, functional beverage innovators can be most effective in delivering new products to the marketplace by focusing their products and messages to targeted populations.

Available in a variety of concentrations and forms for use in all kinds of beverage applications, whey protein has a fresh, neutral taste that often can complement the intended flavor of beverages. The dairy ingredient can easily be incorporated into beverage applications, such as meal replacements, smoothies, protein waters or sports drinks, and can pave the way for manufacturers to reach target consumer groups, improve nutrition labels and work toward product success.

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Pre- and Post-exercise, All Active Adults Can Benefit

Mintel research shows that today, protein is listed among the top five ingredients consumers associate with health and wellness.³ Whey protein is a popular choice for beverage manufacturers hoping to capture the attention of the health-conscious consumer. It can help make the most out of workouts for active adults by nourishing and rejuvenating muscles following exercise, helping to build lean muscle.

"Incorporating whey protein into beverage products provides an ideal method to reach target consumer groups looking for specific benefits," said Laura Gottschalk, vice president, U.S. Manufacturing and Ingredients, Dairy Management Inc.[™] (DMI). Research from the Department of Kinesiology at McMaster University (Hamilton, Ontario, Canada) found drinking an isotonic beverage with as little as 10g of whey protein and 21g of carbohydrates following resistance exercise stimulates the repair and rebuilding of lean muscle necessary to support muscle recovery.⁴

"In combination with resistance exercise, beverages fortified with whey protein can help adults build and maintain valuable muscle," said Matthew Pikosky, Ph.D., R.D., director of research transfer for DMI. "In addition, whey protein is a natural, low-fat and convenient way for consumers to get needed protein in their diet."

An important factor in whey protein's ability to stimulate muscle protein synthesis is due to its amino acid composition. When compared with other protein sources, whey protein contains a higher amount (per 100g) of the essential amino acids that have been shown to be the most effective for muscle repair.^{5,6}

Targeting Young, Active Women

Young, active women are a potential target consumer group for functional beverages, as well as food manufacturers. Results from recent research commissioned by DMI found this group sees a direct link between consuming high-quality protein and achieving weight management goals.⁷ These young women respond well to messages about "body toning" and "long-term health." They view long-term health as being able to stay active, healthy, independent and happy, because it leads to a richer, higher-quality life.

Functional beverages fortified with whey protein can provide a nutritious option for this consumer. With published research available highlighting whey protein's role in muscle recovery and repair, satiety (the feeling of fullness) and weight management, beverage formulators can capitalize on sales growth potential with this target group, if women are given a compelling reason to increase consumption of high-quality whey protein.

In a DMI survey⁸ of young, active women between the ages of 18-29 who do aerobics or strength training at least twice a week, respondents found the following statements meaningful to them:

- Tone up problem areas and/or help you achieve muscle definition, not bulk.
- Get faster results from a workout.
- Build lean muscle to burn calories naturally.
- Lose weight, slim down or drop a size.
- Improve core strength.

Additionally, in relevant research commissioned by DMI, 45% of females in this target age group and slightly older (18-34 years old) like the fact that whey protein comes from milk.⁸ Whey protein works well in a variety of beverage applications women enjoy and find convenient, such as smoothies and isotonic.

Reaching Out to Baby Boomers

Today's aging Baby Boomers are not aspiring to play shuffleboard and bingo. Studies show the 46- to 64-year-old age group wants to stay active well into its golden years,² making them a perfect


target consumer group for beverage products with nutritional benefits to help maintain an active lifestyle.

With age, many adults experience a loss of muscle mass, strength and function, a condition referred to as sarcopenia. This condition affects an

estimated 30% of people over the age of 60, and 50% of those 80 years and older.⁹

"The good news is that diet and lifestyle changes can help to prevent, reverse or slow the progression of sarcopenia," Pikosky said. "The two primary elements to prevent this loss of muscle mass and strength hinge on adequate amounts of dietary protein and routine resistance exercise training."

Research on this population has prompted some scientists and nutritionists to call for an increase in the protein recommendations for older adults, in order to help them preserve muscle and bone mass as they age.¹⁰ A recent review on the aging population concluded that consuming 25-30g of high-quality protein at each meal is recommended, in order to help older adults hit a protein intake goal to maximize the stimulation of muscle protein synthesis, and amounts below this may not be enough to get an effect.¹¹

Fortifying beverage and food products with adequate amounts of whey protein can provide this population with easy ways to boost their protein intake, as they work to stay active for years to come. 

References:

¹ Centers for Disease Control. Obesity: Halting the Epidemic by Making Health Easier. 2009.

² Mintel International Group Ltd., "Functional Beverages—U.S.—September 2009."

³ Mintel International Group Ltd., "Attitudes Towards Food, Weight and Diet—U.S.—May 2009."

⁴ Tang, JE, et al. 2007. Appl. Physio. Nutr. Metab. 32:1132-1138.

⁵ Bucci, LR and Unlu L. Proteins and amino acids in exercise and sport. Energy-yielding metabolism in sports nutrition. Driskell and Wolinsky, eds. Boca Raton, Fla. CRC Press. 2000; 197-200.

⁶ Volpi, E, et al. 2003. Am J Clin Nutr. 78:250-258.

⁷ Summit Research for DMI: Whey protein messaging among young women. Feb. 20, 2009.

⁸ GFK Custom Research for DMI: Consumer Whey Protein Tracker, May 2008.

⁹ Paddon-Jones, D, et al. 2008. Am J Clin Nutr. 87(suppl):1562S-1566S.

¹⁰ Gaffney-Stomberg, et al. 2009. J Am Geriatr Soc. 57:1073-1079.

¹¹ Paddon-Jones, D, et al. 2009. Curr Opin Clin Nutr Metab Care. 12:86-90.

Shannon Koski is an account manager with and consultant to the U.S. Dairy Export Council. She has worked in the dairy industry for 10 years as a scientist and account manager and has a B.S. in food science, University of Minnesota, and an A.A.S. in culinary arts, Arts Institute International, Minneapolis. For more information on how whey protein and other dairy ingredients can play a role in developing foods and beverages to reach today's consumers, go to www.InnovateWithDairy.com. For technical assistance formulating products with dairy ingredients, contact techsupport@InnovateWithDairy.com.