

Low-fat chocolate milk can boost aerobic fitness, research

By Helen Glaberson, 08-Jun-2011

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Consumption of low-fat chocolate milk is beneficial to muscle recovery and exercise performance, claims two recent studies.

Chocolate milk drinkers had greater improvements in aerobic fitness compared to those drinking a carbohydrate beverage or water, according to recent findings from University of Texas Research.

Last week, the university scientists presented the findings from their latest study (1) at the American College of Sports Medicine (ACSM) and 2nd World Congress on Exercise is Medicine.

“Often referred to as ‘nature’s sports drink,’ milk can be an effective way to help the body refuel, rehydrate and recover after a workout as every serving contains nutrients that promote effective recovery after vigorous exercise,” said Gregory Miller, president of the Dairy Research Institute.

Miller is also executive vice president of the National Dairy Council, which co-sponsored the research with the Milk Processor Education Program.

Nutrients in chocolate milk include carbohydrates to help refuel muscles; protein to stimulate repair and growth; and fluid and electrolytes to help replenish what is lost in sweat and to rehydrate the body, according to Miller.

Methodology

The study involved 32 healthy, untrained participants following a 4½ week aerobic training program consisting of one hour of moderately intense cycling, five days each week.

Immediately and one hour following exercise, the cyclists consumed low-fat chocolate milk, a calorie and fat-matched carbohydrate beverage, or water.

Increased lean muscle and decreased body fat of the men and women was measured to assess the drink's effect on body composition.

Other recent findings

The study's findings follow the publication of a larger body of research on chocolate milk in *Journal of Strength and Conditioning Research* last month.

The research (2) studied ten endurance trained cyclists and triathletes who cycled for 90 minutes at moderate exercise intensity prior to performing ten minutes of high-intensity intervals.

Immediately following exercise and again, two hours following exercise, participants consumed a recovery drink of low-fat chocolate milk, a calorie and fat-matched carbohydrate beverage or a non-caloric flavoured water.

The results showed that chocolate milk improved cycling performance more than the other drinks, cutting at least six minutes on average off the cyclist's ride time.

According to the author, chocolate milk and the carbohydrate drink were more effective than water in restoring carbohydrate fuel in the muscle. There was no difference between groups in markers of muscle breakdown.

Chocolate milk was also found to increase signals for muscle protein synthesis, which leads to the repair and rebuilding of muscle proteins, more than the other drinks.

1. Presented: American College of Sports Medicine 58th Annual Meeting and 2nd World Congress on Exercise is Medicine, June 2, 2011. *Aerobic exercise training adaptations are increased by post-exercise carbohydrate-protein supplementation* Authors: Ferguson-Stegall, et al.

2. Source: *Journal of Strength and Conditioning Research* Vol. 25, Issue 5, Pages 1210-1224, 2011 *Post-exercise carbohydrate-protein supplementation improves subsequent exercise performance and intracellular signaling for protein synthesis* Authors: Ferguson-Stegall, et al