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Chocolate Milk's 'Natural' Muscle Recovery Benefits Match or May Even Surpass A Specially Designed Carbohydrate Sports Drink

Soccer players and exercise enthusiasts now have another reason to reach for low fat chocolate milk after a hard workout, suggests a new study from James Madison University presented at the American College of Sports Medicine annual meeting. Post-exercise consumption of low fat chocolate milk was found to provide equal or possibly superior muscle recovery compared to a high-carbohydrate recovery beverage with the same amount of calories.

In this study, 13 male college soccer players participated in "normal" training for one week, then were given low fat chocolate milk or a high-carbohydrate recovery beverage daily after intense training for four days. After a two week break, the athletes went through a second round of "normal" training, followed by four-day intensified training to compare their recovery experiences following each beverage (with the same amount of calories). Prior to the intense training, at day two and at the completion of this double-blind study, the researchers conducted specific tests to evaluate "markers" of muscle recovery.

All of the athletes increased their daily training times during the intensified training, regardless of post-exercise beverage yet after two and four days of intensified training, chocolate milk drinkers had significantly lower levels of creatine kinase - an indicator of muscle damage - compared to when they drank the carbohydrate beverage. There were no differences between the two beverages in effects on, soccer-specific performance tests, subjective ratings of muscle soreness, mental and physical fatigue and other measures of muscle strength. The results indicate that low fat chocolate milk is effective in the recovery and repair of muscles after intense training for these competitive soccer players.

This new study adds to a growing body of evidence suggesting milk may be just as effective as some commercial sports drinks in helping athletes recover and rehydrate. Chocolate milk has the advantage of additional nutrients not found in most traditional sports drinks. Studies suggest that when consumed after exercise, milk's mix of high-quality protein and carbohydrates can help refuel exhausted muscles. The protein in milk helps build lean muscle and recent research suggests it may reduce exercise-induced muscle damage. Milk also provides fluids for rehydration and minerals like calcium, potassium and magnesium that recreational exercisers and elite athletes alike need to replace after strenuous activity.

Nearly 18 million Americans play soccer, according to American Sports Data, and millions more engage in recreational sports. Many experts agree that the two-hour window after exercise is an important, yet often neglected, part of a fitness routine. After strenuous exercise, this post-workout recovery period is critical for active people at all fitness levels to help make the most of a workout and stay in top shape for the next exercise bout. Sweating not only results in fluid losses, but also important minerals including calcium, potassium and magnesium. The best recovery routine should replace fluids and nutrients lost in sweat, and help muscles recover.

Increasingly, fitness experts consider chocolate milk an effective (and affordable and enjoyable) option as a post-exercise recovery drink. The Dietary Guidelines for Americans recommend that Americans drink three glasses of low fat or fat free milk every day. Drinking low fat chocolate milk after a workout is a good place to start.

Source: Gilson SF, Saunders MJ, Moran CW, Corriere DF, Moore RW, Womack CJ, Todd MK. Effects of chocolate milk consumption on markers of muscle recovery during intensified soccer training. *Medicine & Science in Sports & Exercise*. 2009;41:S577.