



Chocolate Milk Aids in Post-Exercise Recovery

The next time your players finish a rigorous workout or competition game, you may want to consider a surprising new sports drink to help refuel tired muscles: chocolate milk. A new study, published in the International Journal of Sport Nutrition and Exercise Metabolism, reports that athletes who drank chocolate milk after an intense bout of exercise were able to workout longer and with more power during a second workout compared to athletes who drank commercial sports beverages.

"Our study indicates that chocolate milk is a strong alternative to other commercial sports drinks in helping athletes recover from strenuous, energy-depleting exercise," according to co-author Joel M. Stager, PhD, professor of kinesiology at Indiana University. "Chocolate milk contains an optimal carbohydrate to protein ratio, which is critical for helping refuel tired muscles after strenuous exercise and can enable athletes to exercise at a high intensity during subsequent workouts." Stager and colleagues had nine cyclists bike until their muscles were depleted of energy, rest four hours, then bike again until exhaustion, three separate times. During the rest period, the cyclists drank one of three beverages:

- 1) low-fat chocolate milk
- 2) traditional fluid replacement sports drink
- 3) carbohydrate replacement sports drink

During the second round of exercise, the researchers found that cyclists who drank chocolate milk during the rest period were able to bike nearly twice as long before reaching exhaustion than those who consumed the carbohydrate replacement drink, and as long as those who consumed the fluid replacement drink. Researchers theorize that the combination of carbohydrates and protein found in chocolate milk is what helped enhance the cyclists' performance and suggest that flavored milk may be an optimal beverage for refueling muscles after exercise. The researchers also note that chocolate milk is a great-tasting and cost-effective alternative to many sports drinks. In addition to its ideal combination of carbohydrates and protein, flavored milk contains seven other essential nutrients that are important for an athlete's health - including bone-building calcium. No other sports drink contains the nutrient package found in flavored milk.

Comments, Amanda Carlson, MS, RD, Performance Nutrition & Research Coordinator

This study suggests (as many have done already) that a combination of carbohydrate and protein is more beneficial to athletes than just carbohydrate alone in the post-workout meal or supplement. This study takes it one step further by identifying a food product - chocolate milk - that is easy to get, inexpensive, and tastes great. My only suggestion is that you reach for a non-fat or skim chocolate milk. 48% of calories in whole milk come from fat; 33% in 2% milk come from fat; 20% of the calories in 1% milk come from fat, and 0 percent of the calories from skim milk come from fat. So, when reaching for chocolate milk as your post-workout recovery drink of choice, choose the non-fat version.

The engineered post-workout protein/carb shakes (like EAS Myoplex) are based on milk proteins in combination with quick and slow carbs. There are two types of milk proteins - whey and casein. Whey is a quickly digested protein that gives the body an immediate surge of amino acids to jumpstart the recovery process. Casein is broken down slower, which means there is amino acid availability for an extended period of time. The casein component allows for the body to continue recovering into the few hours after ingestion. The carbohydrates from the chocolate are quick, so they help to replenish fuel stores quickly. Whether it is a shake or good old chocolate milk, research continues to prove that carb/protein is the way to go.