Medical Xpress

Chocolate milk is a 'natural' for post-exercise recovery

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One of the best post-exercise recovery drinks could already be in your refrigerator, according to new research presented at the American College of Sports Medicine conference this week. In a series of four studies, researchers found that chocolate milk offered a recovery advantage to help repair and rebuild muscles, compared to specially designed carbohydrate sports drinks.

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 workout.

The new research suggests that drinking fat free chocolate milk after exercise can help the body retain, replenish and rebuild muscle to help your body recover. Drinking lowfat chocolate milk after a strenuous workout could even help prep muscles to perform better in a subsequent bout of exercise. Specifically, the researchers found a chocolate milk advantage for:

- Building Muscle - Post-exercise muscle biopsies in eight moderately trained male runners showed that after drinking 16 ounces of fat free chocolate milk, the runners had enhanced skeletal muscle protein synthesis - a sign that muscles were better able to repair and rebuild - compared to when they drank a

carbohydrate only sports beverage with the same amount of calories. The researchers suggest that "athletes can consider fat-free chocolate milk as an economic nutritional alternative to other sports nutrition beverages to support post-endurance exercise skeletal muscle repair."[1]

- Replenishing Muscle "Fuel" - Replacing muscle fuel (glycogen) after exercise is essential to an athlete's future performance and muscle recovery. Researchers found that drinking 16 ounces of fat free chocolate milk with its mix of carbohydrates and protein (compared to a carbohydrate-only sports drink with the same amount of calories) led to greater concentration of glycogen in muscles at 30 and 60 minutes post exercise.[2]

- Maintaining Lean Muscle - Athletes risk muscle breakdown following exercise when the body's demands are at their peak. Researchers found that drinking fat free chocolate milk after exercise helped decrease markers of muscle breakdown compared to drinking a carbohydrate sports drink.[3]

- Subsequent Exercise Performance - Ten trained men and women cyclists rode for an hour and a half, followed by 10 minutes of intervals. They rested for four hours and were provided with one of three drinks immediately and two hours into recovery: lowfat chocolate milk, a carbohydrate drink with the same amount of calories or a control drink. When the cyclists then performed a subsequent 40 kilometer ride, their trial time was significantly shorter after drinking the chocolate milk compared to the carbohydrate drink and the control drink.[4]

Why Chocolate Milk?

Chocolate milk's combination of carbohydrates and high-quality protein

first made researchers take notice of a potential exercise benefit. The combination of carbs and protein already in chocolate milk matched the ratio found to be most beneficial for recovery. In fact, studies suggest that chocolate milk has the right mix of carbs and protein to help refuel exhausted muscles, and the protein in milk helps build lean muscle. This new research adds to a growing body of evidence suggesting milk can be just as effective as some commercial sports drinks in helping athletes refuel and recover.

Milk also provides fluids for rehydration and electrolytes, including potassium, calcium and magnesium lost in sweat, that both recreational exercisers and elite athletes need to replace after strenuous activity. Plus, chocolate milk is naturally nutrient-rich with the advantage of additional nutrients not found in most traditional sports drinks. Penny-for-penny, no other post-exercise drink contains the full range of vitamins and minerals found in chocolate milk.

More information: Sources:

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4. Ferguson-Stegall L, McCleave E, Doerner PG, Ding Z, Dessard B, Kammer L, Wang B, Liu Y, Ivy J. Effects of chocolate milk supplementation on recovery from cycling exercise and subsequent time trial performance. Medicine & Science in Sports & Exercise. 2010;42:S536.

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