

AFTER PHYSICAL ACTIVITY YOU WANT TO MAKE SURE THAT YOU:

- Get enough carbohydrates to replenish glycogen (carb) stores
- Consume protein to rebuild muscles
- Have enough fluids and electrolytes to replace what is lost in sweat.

Milk is an excellent go-to recovery beverage to enjoy after any physical activity because of its unique mix of nutrients, including fluid, protein, carbohydrates and electrolytes.



MILK VS. SPORTS DRINKS

Milk has similar amounts of carbohydrate and sodium as sports drinks, but more potassium and protein. Plus, milk is a whole food, while sports drinks are ultra-processed and contain artificial colours and flavours.

Nutrient (per cup)	Average Commercial sports drink*	Milk
Carbohydrate	15 g	12 g
Sodium	135 mg	110 mg
Potassium	40 mg	387 g
Protein	0 g	9 g

*Based on an average of Gatorade Cool Blue and Powerade Mixed Berry

How much milk?

After intense exercise, enjoy two cups of milk to:

- Get 18 grams of high-quality protein to rebuild muscles
- Replenish fluids and electrolytes lost through sweat
- Refuel carbohydrate (glycogen) stores

Milk is readily available, making it a convenient and easy option to facilitate post-exercise recovery. Enjoy a refreshing cold glass of milk or add it to a smoothie for a delicious drink.

NUTRIENTS IN MILK: IDEAL FOR SPORT RECOVERY

Protein, carbs and electrolytes in milk make it a smart beverage after any physical activity

Whether you are training on an exercise bike, running marathons or participating in team sports, matching nutrition with exercise is a vital skill. Learn how milk can help replenish vital nutrients after your workout.



For more information, visit milk.org.

WHY CHOOSE MILK AS A SPORT RECOVERY DRINK?

Milk naturally contains the nutrients that are required after any physical activity: protein, carbohydrates, water and electrolytes such as sodium and potassium. Plus, milk is considered isotonic, which means it contains similar concentrations of carbohydrate and sodium to match the body's needs. All of these factors help milk fuel and rehydrate the body after exercise.

Researchers have found that drinking milk after exercise can:

- Support acute recovery
- Help with long-term training adaptation
- Reduce post-exercise muscle soreness
- Reduce muscle loss
- Reduce symptoms of body stress after sport, even better than carb-based sport recovery drinks



WHAT'S THE LINK BETWEEN MILK AND EXERCISE RECOVERY?

Protein: Milk contains nine grams of protein per cup, which helps the body repair the muscle tissues that broke down during exercise.

Carbohydrates: Milk contains lactose, a naturally occurring milk sugar. Lactose acts as that body's fuel source before, during and after exercise. Lactose helps optimize glycogen, which is the storage form of carbohydrates in the body.

Chocolate milk, which contains added sugars in addition to the natural occurring lactose sugar, may be more advantageous when additional carbohydrate is needed.¹⁴ That may be the case for soccer or hockey tournaments, marathons, bike races, or other endurance sports with high sweat loss. Studies show that drinking chocolate milk right after exercise and again two hours after exercise helps with muscle recovery and lessens muscle damage.

Fluid and electrolytes: During exercise, it's common for fluid and electrolytes to be lost through sweat. These nutrients need to be replenished during and after activity. Milk contains fluid and electrolytes, including sodium, potassium and magnesium, which help with fluid recovery and rehydration after exercise.

Electrolytes also help improve the recovery of skeletal muscle. One study showed that drinking milk restored fluid balance better than water or carbohydrate electrolyte drinks, due to how these beverages are digested. Milk is released more slowly from the stomach compared to water or sports drinks. The complete protein found in milk contributes to this beneficial effect.

¹ <https://linkinghub.elsevier.com/retrieve/pii/S221226721501802X>

² <https://jissn.biomedcentral.com/articles/10.1186/s12970-019-0288-5>

³ <https://www.tandfonline.com/doi/abs/10.1080/17461391.2018.1534989?journalCode=tejs20>

⁴ <https://journals.physiology.org/doi/full/10.1152/japplphysiol.00745.2016>

⁵ <https://www.tandfonline.com/doi/abs/10.1080/17461391.2018.1534989?journalCode=tejs20>

⁶ <https://www.tandfonline.com/doi/abs/10.1080/17461391.2018.1534989?journalCode=tejs20>

⁷ <https://www.tandfonline.com/doi/abs/10.1080/17461391.2018.1534989?journalCode=tejs20>

⁸ <https://www.mdpi.com/2072-6643/12/1/112>

⁹ <https://www.mdpi.com/2072-6643/10/2/228>

¹⁰ <https://www.mdpi.com/2072-6643/12/1/112>

¹¹ <https://www.mdpi.com/2072-6643/10/2/228>

¹² <https://www.mdpi.com/2072-6643/10/2/228/htm>

¹³ <https://www.sciencedirect.com/science/article/abs/pii/S095869462030340X>

¹⁴ <https://pubmed.ncbi.nlm.nih.gov/29921963/>

¹⁵ <https://karger.com/books/book/2775/chapter-abstract/5802048/Chocolate-Milk-A-Post-Exercise-Recovery-Beverage?redirectedFrom=fulltext>

¹⁶ <https://www.mdpi.com/2072-6643/10/2/228/htm>

¹⁷ <https://jissn.biomedcentral.com/articles/10.1186/s12970-019-0288-5>

¹⁸ <https://www.cambridge.org/core/journals/british-journal-of-nutrition/article/a-metered-intake-of-milk-following-exercise-and-thermal-dehydration-restores-whole-body-net-fluid-balance-better-than-a-carbohydrate-electrolyte-solution-or-water-in-healthy-young-men/1124729E49B3AC434876B15A9DF7F70>

¹⁹ <https://www.tandfonline.com/doi/abs/10.1080/17461391.2018.1534989?journalCode=tejs20>

²⁰ <https://www.tandfonline.com/doi/full/10.1186/s12970-017-0189-4>

²¹ <https://www.tandfonline.com/doi/abs/10.1080/17461391.2018.1534989?journalCode=tejs20>

²² <https://pubmed.ncbi.nlm.nih.gov/29462969/>

²³ <https://jissn.biomedcentral.com/articles/10.1186/s12970-019-0288-5>