

# Chocolate Milk: The New Sports Drink?

## Study Shows Chocolate Milk Helps Athletic Performance

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Melissa McNamara, CBSNews.com

A 2006 study, published in the *International Journal of Sport Nutrition and Exercise Metabolism*, shows that plain old chocolate milk is as good -- or better -- than sports drinks like Gatorade at helping athletes recover from strenuous exercise. The study was so conclusive regarding the nutritional value and effectiveness of chocolate milk as a performance-enhancer that the NCAA briefly banned institutions from providing it for student-athletes. After a time, the NCAA changed its position, and it is now permissible to provide chocolate milk to student-athletes during the course of practice and competition.

The study helps to counter the notion that high-tech, expensive supplements are better than whole foods when it comes to athletic performance. They also note that milk contains key nutrients, such as calcium and vitamin D, in quantities that sports drinks can't match.

"[Milk] is a sports drink 'plus,'" Keith Ayoob, EdD, a registered dietitian and associate professor of pediatrics at the Albert Einstein College of Medicine, tells WebMD. "It will supply you with things you need whether or not you're working out."

The study builds on findings that intense endurance exercise reduces the muscles' supply of stored glucose, or glycogen, a key source of fuel for exercise. To maximize glycogen replacement, the American College of Sports Medicine and the American Dietetic Association recommend taking in a serving of carbohydrates (20-30 grams) within 30 minutes after a long and vigorous workout.

### Milk vs. Sports Drinks

Common sports drinks such as Gatorade supply those carbs, as well as fluids and electrolytes lost through sweat. However, more recent research suggests that adding protein to the mix may further hasten recovery. Hence the new wave of drinks such as Endurox R4 that include protein as well as higher doses of carbs.

In the study, nine male cyclists rode until their muscles were depleted of energy, then rested four hours and biked again until exhaustion. During the rest period, the cyclists drank low-fat chocolate milk, Gatorade, or Endurox R4. During a second round of exercise, the cyclists who drank the chocolate milk were able to bike about 50% longer than those who drank Endurox, and about as long as those who drank the Gatorade.

The findings suggest that chocolate milk has an optimal ratio of carbohydrates to protein to help refuel tired muscles, researcher Joel M. Stager, PhD, Indiana University kinesiology professor, tells WebMD.

But the most puzzling result of the study, experts say, was why Endurox -- which has the same carb-to-protein ratio as the chocolate milk -- fared so poorly. Researcher Jeanne D. Johnston, MA, tells WebMD it may have to do with the different composition of the sugars in the milk. Another theory is that the sugars in the milk may be better absorbed in the gut than those in the Endurox.

Edward F. Coyle, PhD, a researcher on exercise and hydration at the University of Texas, tells WebMD the trial would have been stronger if the researchers had also tested the effect of flavored water or another dummy (placebo) drink.

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The study was partly funded by the Dairy and Nutrition Council, an industry group. Coyle says that the study's reliance on industry funding is not unusual in the world of sports research, as federal funding for such research is hard to come by.

### A Cheaper Alternative?

While rapid nutrient replacement may not be important for casual exercisers, **it can make a big difference in performance for competitive athletes who work out vigorously once or twice a day**, says Roberta Anding, a sports dietitian and spokeswoman for the American Dietetic Association.

Anding has long recommended chocolate milk for young athletes who come to her practice at Texas Children's Hospital in Houston. For children and teenagers from lower-income families, it doesn't make sense to spend serious money on sports drinks when they can get milk as part of a subsidized lunch program, she tells WebMD. The only advantage of sports drinks, she notes, is that they never spoil.

Ayoob estimates that more than **two-thirds of teenagers should be drinking more milk anyway because they don't get enough calcium in their diets**. He also recommends milk for its vitamin D and potassium content. "For me, this is a no-brainer," he says.

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# *Huskies Required To Drink Chocolate Milk*

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Associated Press

SEATTLE (AP) -- After another exhausting practice, Washington football players trudge to the edge of the Husky Stadium turf where coolers brim with refreshing drinks.

Of course, water and Gatorade are there, along one that appears out of place on a football field -- filled with chocolate milk.

"It tastes good to me and, hey, if it's nutritious and helps my body, I'm all for it," wide receiver Cody Ellis said.

The Huskies are experimenting with a new form of nutritional replacement following practices. Along with giving the usual water and sports drinks to rehydrate and replenish during grueling preseason practices, Washington's football staff is requiring its players to drink a small carton of fat-free chocolate milk.

And no, Oreos are not included.

"This is just another way to facilitate post-exercise carbohydrate replenishment. This is another facet that we can use in our supplement program," Washington director of sport performance Trent Greener said. "The research substantiates it and it's something too that the kids are going to be compliant with."

The decision to implement the program came after a study last fall from scientists at Indiana University that was published in the International Journal of Sports Nutrition and Exercise Metabolism and was supported in part by the Dairy and Nutrition Council.

The small study found a significant difference between using a fluid-replacement drink or chocolate milk for athletes following exercise, with dairy folks touting the nutritional benefits of drinking milk -- chocolate or otherwise.

It was a limited study, but caught the eye of Greener and UW sports nutritionist Emily Edison. Along with athletic trainer Rob Scheidegger, the trio developed a plan to take the use of chocolate milk one step further, building upon a program already in place.

"We've always used Gatorade," Scheidegger said. "But we're always trying to find ways to get natural foods into people. So if we can find a natural product at the end of practice that aids with recovery, keeps them hydrated and gives them the energy that they need we're going to go with something like that."

So, following practices this month, while players are taking ice baths to cool their legs, they are required to drink a bottle of Gatorade and a carton of milk back-to-back before leaving the field.

Certainly, there was hesitation on the players' part. Not so much that it was chocolate milk, but more so, drinking it before or after downing a fluid-replacement drink that could be any sort of flavor -- orange, watermelon or lemon-lime for example.

In stepped head coach Tyrone Willingham to calm some of the apprehension.

"It was good. I love chocolate milk anyway," said Willingham, who tried the combination in front of his players at the start of practice earlier this week.

"I check to make sure as much as possible what is going on and what they're going through. There are somethings that I don't have to experience because I've already done them, but in this case I hadn't done that. So I wanted to see what it was, the combination, and get a feel for it."

There is little exception for players who don't like milk. Only those who are lactose intolerant are excused from the requirement, and those players are given a substitute drink with similar benefits.

Wide receiver Marcel Reece -- a stout 6-foot-3 and 240 pounds -- couldn't remember the last time he voluntarily poured himself a glass of milk.

"You just trust what the strength and conditioning coach say, you trust what the trainers say, you trust what our coaches say," Reece said. "They say it helps this, so it helps that. So we just do it."

Does that mean he likes it?

"You don't have to taste it, you just do it," he said.

Greener said Washington isn't alone in experimenting with chocolate milk, but wasn't sure how extensive the use. The Huskies plan to work a similar regime into their regular season nutritional plans as well.

Should the Huskies win a big game, fans aren't likely to see Willingham getting doused with chocolate milk instead of the traditional Gatorade. But the idea is a hit with some players.

When asked recently what was the best part of being a Husky, center Juan Garcia had a unique answer: "I said 'tradition and chocolate milk.'"

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