

## New study: Montmorency tart cherry juice found to aid recovery of soccer players

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Montmorency tart cherry juice may be a promising new recovery aid for soccer players following a game or intense practice. Credit: Cherry Marketing Institute

Montmorency tart cherry juice may be a promising new recovery aid for soccer players following a game or intense practice. A new study

published in *Nutrients* found Montmorency tart cherry juice concentrate aided recovery among eight semi-professional male soccer players following a test that simulated the physical and metabolic demands of a soccer game. The U.K. research team, led by Glyn Howatson at Northumbria University, conducted this double-blind, placebo-controlled study to identify the effects of Montmorency tart cherry juice on recovery among a new population of athletes following prolonged, intermittent exercise.

"Previous research on Montmorency tart [cherry juice](#) has examined recovery following muscle damaging protocols such as heavy weight training, long-distance running or cycling, but there are no studies that have used sport-specific activity to cause the exercise stress," Howatson said. "This is surprising given that many teams in professional and international soccer and rugby already use Montmorency tart cherry juice to aid recovery."

Sprint sports such as soccer, rugby, and lacrosse require a high volume of energy turnover and eccentric muscle actions resulting in metabolic and mechanically induced stress.

## Methodology

The study involved 16 semi-professional male soccer players aged 21 to 29 who were randomly assigned to either a Montmorency tart cherry concentrate group or a placebo control group. Montmorency group participants consumed about 1 ounce (30 ml) of a commercially available Montmorency tart cherry juice concentrate mixed with 100 ml of water twice per day (8 a.m. and 6 p.m.) for seven consecutive days—for four days prior to the simulated trial and for three days after the trial. Following the same schedule, [placebo group](#) participants consumed a calorie-matched fruit cordial with less than 5 percent fruit mixed with water and maltodextrin. The 30 ml dosage of Montmorency

tart cherry juice concentrate contained a total anthocyanin content of 73.5 mg, or the equivalent of about 90 whole Montmorency tart cherries.

Participants were instructed to consume a low polyphenolic diet for 48 hours prior to beginning each Montmorency or placebo supplementation routine and throughout the seven-day consumption period. Food diaries were used to assess compliance, which helped researchers more accurately measure the efficacy of the phenolic-rich compounds in the Montmorency tart cherry concentration intervention.

## Results

Montmorency tart cherry juice, compared to a placebo, was found to maintain greater functional performance, impact a key marker of inflammation and decrease self-reported muscle soreness among study participants following prolonged activity that mirrors the demands of field-based sports. While additional research is needed, the authors suggest the dampening of the post-exercise inflammatory processes may be responsible.

Across every performance measure, including maximal voluntary isometric contraction, countermovement jump height, 20 m sprint time, knee extensors, 5-0-5 agility, the Montmorency group showed better performance than the placebo group. Additionally, the Montmorency group showed significantly lower levels of Interleukin-6, a marker for inflammation, particularly immediately post-trial. Ratings for muscle soreness (DOMS) were significantly lower in the Montmorency group across the 72-hour post-trial period. No significant effects in muscle damage or oxidative stress were observed in either the Montmorency group or the placebo group.

These data support previous research showing similar results for athletes performing marathon running, high-intensity strength training, cycling,

and metabolic exercise. The new findings suggest Montmorency tart cherry juice may benefit athletes involved in prolonged, repeat sprint activity, such as soccer, rugby, and lacrosse.

Montmorency tart cherries are the most common variety of tart cherries grown in the U.S., and are available year-round in dried, frozen and juice forms—including juice concentrate, which was the form used in the U.K. study. Montmorency [tart cherry](#) juice concentrate can be mixed with water or other juices. It can also be consumed straight from the bottle or used as an ingredient in recipes, including smoothies and other beverages.

**More information:** Phillip Bell et al, The Effects of Montmorency Tart Cherry Concentrate Supplementation on Recovery Following Prolonged, Intermittent Exercise, *Nutrients* (2016). [DOI: 10.3390/nu8070441](https://doi.org/10.3390/nu8070441)

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