Consuming chocolate milk post-exercise improves athletic outcomes versus a carbohydrate-only sports drink in adolescents: A field-based study

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Introduction

- Post-exercise CHO+PRO maximizes resistance training effects
- CHO increases insulin to decrease cortisol post-exercise
- PRO promotes protein synthesis post-exercise
- Laboratory studies fail to match real-world supplementation
- Previous research focuses on adults, while the 7,807,047 high school sports participants remain largely unstudied
- CM has ideal levels of Na, CHO, and PRO to rehydrate, replenish, and rebuild in an accessible and economical package

Participants

- N = 100, Mean age = 15.1, SD = 1.3; 78% Male; 64% Caucasian
- 3 groups – Varsity boys (n=40); JV boys (n=30); All Females (n=30)

Design & Methods

Design.
- Study used a strength & speed camp at a 6A Texas high school
- Research personnel randomly-assigned participants to receive CM or CHO immediately post-exercise

Results

- No changes in body weight or body fat %

Composite Strength Score

Squat

Bench Press

Pre vs. Post

Results

Conclusion

- First Study to Look at
  - Post-exercise CHO+PRO vs. CHO in an adolescent population.
  - Real-world post-exercise supplementation

Discussion.
- The high intensity training potentially lead to an overtraining effect in the CHO group due to insufficient post-exercise nutrition
- The CHO group may not have achieved the prescribed number of repetitions during training due to inadequate recovery
- CM merits consideration as an effective post-exercise supplement

Limitations.
- Lack of control regarding training regimen
- Short training duration for body composition measures

Future Directions.
- A longer study duration and greater training control may reveal trends towards overtraining and insufficient recovery

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