Ergogenic Effects of Beetroot Juice on DIII College Hockey Players
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Introduction
- Nitrates can decrease the amount of oxygen required for a given exercise
- Research has been limited to effects of beetroot juice on male cyclists and cross-country skiers

Purpose
- To test the potential aerobics benefits of beetroot juice on male and female DIII College hockey players

Methods
- IRB approval and informed consent was obtained
- 7 female and 9 male varsity hockey players completed a double-blind, crossover design study
- A single dose of concentrated, nitrate-rich (6.2 mmol) Beet It beetroot juice or nitrate-depleted Beet It beetroot juice was consumed 2.5 hours prior to completion of a Yo-Yo intermittent recovery 2 test (Yo-Yo IR2)
- Subjects ran intervals until they could not keep pace with the beeps; the total distance completed was recorded
- Wilcoxon signed rank test was used to determine statistical significance

Results
- Males - 10% greater distance with the nitrate-rich beetroot juice compared to control
- Males - 17% greater distance with the nitrate-depleted beetroot juice compared to control
- Females - no significant difference for either the nitrate-rich beetroot juice or the nitrate-depleted beetroot juice
- 30% average greater distance for males compared to females in all three treatments
- Only 46% of subjects correctly guessed which product they received

Conclusion
- A single dose of beetroot juice with 6.2 mmol nitrate did not significantly improve intense aerobic performance
- Beet It allowed for successful blinding
- Supplementation over an extended period of time could reveal different results
- Yo-Yo IR2 test may not have been too intense for females to accurately assess their maximal aerobic capacity

Acknowledgments
- Special thanks to the Coach Kranz, Coach Schueller, and the CSB/SJU hockey players
- Dr. Michael Gass for assisting with statistical analysis

Figure 1. Data represents mean and standard deviation. Total distance completed was significantly greater comparing A to B (p = 0.022), A to C (p = 0.014), and B to C (p = 0.03).

Figure 2. Data represents mean and standard deviation. No significant changes were observed between any of the three treatments (p > 0.05).