

EFFECTS OF A CAFFEINATED PRE-WORKOUT SUPPLEMENT ON ANAEROBIC PERFORMANCE IN DIII COLLEGE FOOTBALL PLAYERS

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Introduction

- Pre-workout supplements (PWS) typically contain caffeine, creatine and other proposed ergogenic ingredients.
- Research supporting the effects of these products on anaerobic performance is limited.

Purpose

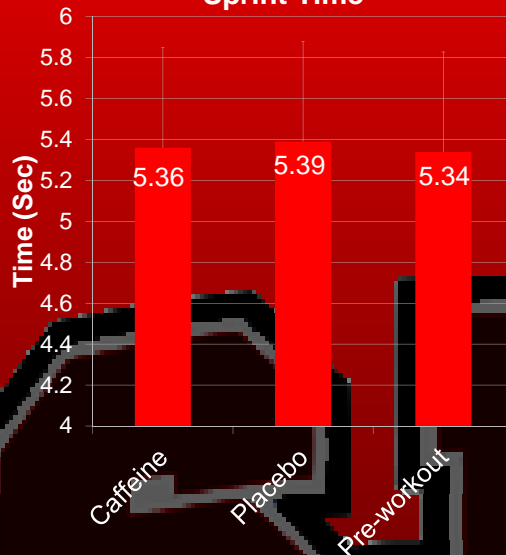
- To determine if a single dose of a National Science Foundation (NSF) safe PWS is more effective than caffeine alone in enhancing anaerobic performance
- To determine the knowledge and use of nutritional supplements by DIII football players.

Methods

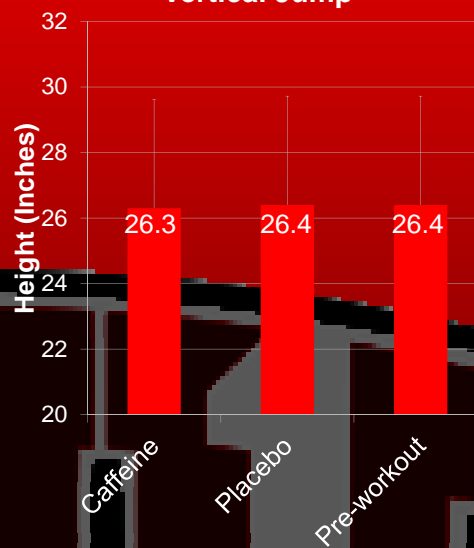
- IRB approval and informed consent were obtained
- Players (n=12) participated in a crossover study comparing a placebo, caffeine only and Extreme Edge Pre-workout formula (EEPW).
- Subjects completed three anaerobic tests including: maximum repetition bench press test at 50% of max weight, a vertical jump test, and three electronically timed 40 yard sprints.
- ANOVA was used to determine significance.
- An anonymous survey assessed basic knowledge and use of nutritional supplements (n=96).



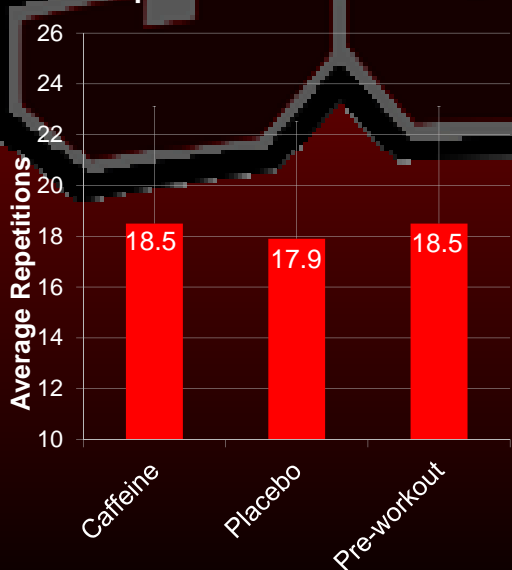
Results For Average 40 Yard Sprint Time



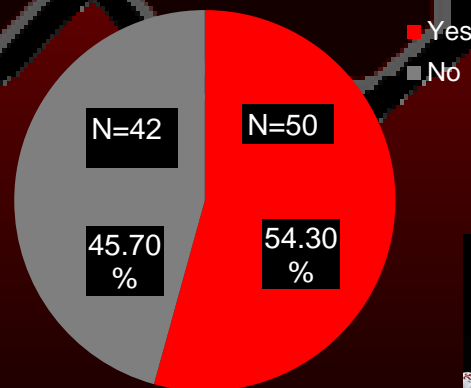
Results For Average Vertical Jump



Results For Maximum Repetition Bench Press Test



Players Currently Taking Nutritional Supplement



Results

- The pre-workout supplement did not statistically improve anaerobic performance in maximum bench reps [$p = 0.941$], average vertical jump height [$p = 0.973$] or average sprint time [$p = 0.991$].
- 54.3% report using nutritional supplements
- Protein powder, creatine, multi-vitamin and pre-workout supplements were most common.
- Over 34% of players did not know the role of creatine and 67% did not know the function of caffeine in the body.

Conclusions

- A single dose of the EEPW was not more effective than caffeine alone or the placebo in enhancing anaerobic performance.
- The acute benefits of this product may not be worth the high cost but chronic use was not tested.
- Players lack knowledge about the function of ingredients in nutritional supplements.

Acknowledgements

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All data figures presented in means with corresponding standard deviations.