Endurance Performance After Caffeine Pill Ingestion

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ABSTRACT

Endurance is the capacity one can last during exercise and the time it takes to reach fatigue to a certain point. Caffeine is a mild stimulant drug providing many people with energy and/or alertness; it also stimulates the nervous muscles. Placebo is an experimental alternative to caffeine that was used. The purpose of this research is to examine if caffeine pills help increase endurance levels. 17 subjects participated in the graded exercise test until fatigue was reached. All participants took both supplements on different testing days to create a counter balance effect. The order was counter balanced.

METHODS

RESULTS

DISCUSSION & CONCLUSION

Calcium was chosen because it was not a nerve stimulant. Caffeine pills do not contain carbs or sugar compared to other forms of energy supplements. Although heart rates were measured in the subjects, the heart rate data was not used to determine if caffeine had any effect on endurance. Since endurance performance is measured, as the time it takes to reach a certain distance VO2 max was the ideal form of measuring endurance.

As expected, the subjects reacted more to the caffeine during performance than when they did to the calcium pill. The results, overall, show that caffeine can help aid in endurance and increased VO2 max. Therefore, we can reject the null hypothesis H0: caffeine pill= placebo pill.

We concluded that caffeine does increase endurance and will ultimately give the athlete more push, fight and stamina to get through an intense workout.

Caffeine: VO2 max of to 31.29±6.93 (L/min)

Placebo: VO2 max of 28.49±6.81 (L/min)

Effect on endurance (p=0.029)

2.402 (df)=16. p=0.029. The study found evidence that caffeine pills help increase endurance levels.

There were total of 17 participants; 11 M and 6 F ages 18-30 varied in fitness background.

The instruments used were: Caffeine Supplement, Placebo (Calcium) supplement, Treadmill, and Stopwatch.


REFERENCES


• Pollock et al. (1976). "Physiological response of med 49-65 years of age to endurance exercise."


