ABSTRACT

THE INFLUENCE OF CREATINE AND COMBINED CREATINE PLUS CAFFEINE SUPPLEMENTATION ON SKELETAL MUSCLE RECRUITMENT AND TORQUE GENERATION DURING HIGH INTENSITY ISOKINETIC EXERCISE

Eight subjects (24 yrs±1.8 yrs) performed three Thorstensson tests to investigate whether creatine alone and creatine plus caffeine would have an ergogenic effect on isokinetic dynamic exercise performance. Subjects supplemented with either placebo (corn starch) or creatine (20 grams per day) for 6 days and then ingested either placebo or caffeine (5 mg/kilogram body weight) 1 hour prior to testing. Electromyography was used to analyze neuromuscular function of the vastus medialis and vastus lateralis during each testing session. The ergogenicity of the three treatments was determined by measuring the following variables: initial torque production, mean and median power frequency, and integrated EMG. There was not a significant difference ($p > 0.05$) in anaerobic performance between any of the three supplementation treatments or in any of the EMG variables during the three testing protocols.

Stephen Garrett Dinkel
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