

Effects of 8-Week Bee Bread Supplementation on Isokinetic Muscular Strength and Power in Young Athletes

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Abstract : Introduction: To date, information on the effects of bee bread supplementation on isokinetic muscular performance are lacking. Therefore, this study was carried out to investigate the effects of 8-week bee bread supplementation on isokinetic muscular strength and power in young athletes. Methodology: Twelve male athletes (age: 24.0 ± 1.8 years; BMI: 22.3 ± 1.3 kg.m⁻²; VO₂max: 52.0 ± 2.8 mL.kg⁻¹.min⁻¹) were recruited in this randomised double blind, placebo-controlled crossover study. Participants consumed either bee bread at a dosage of 20 g.d⁻¹ or placebo for 8 weeks. An isokinetic dynamometer was used to measure participants' lower limb muscular strength and power prior (pre-test) and post (post-test) 8 weeks of experimental period. Testing angular velocities were set at 180o.s⁻¹ and 300o.s⁻¹ to determine knee flexion and extension muscular peak torque (an indicator of muscular strength) and average power of the participants. Statistical analyses were performed using ANOVA with repeated measures. Results: Isokinetic knee extension peak torque and average power at 180o.s⁻¹, and isokinetic knee flexion peak torque and average power at 180o.s⁻¹ were significantly ($p < 0.05$) higher at post-test compared to pre-test with bee bread supplementation. However, significant differences were not observed in the measured parameters between pre- and post-test with placebo supplementation. Conclusion: Supplementation of bee bread for 8 weeks at a dosage of 20 g daily increased some of the measured isokinetic muscular strength and power parameters in young athletes.

Keywords : bee bread, isokinetic, power, strength

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