

Creatine supplementation improves muscular performance in older women.

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Source

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Abstract

Muscle power and strength decrease with age leading to reduced independence and increased health risk from falls. Creatine supplementation can increase muscle power and strength. The purpose of this study was to examine the effects of 7 days of creatine supplementation on body composition, muscular strength, and lower-body motor functional performance in older women. Thirty 58-71 year old women performed three test sessions (T1-T3) each separated by one week. Each session consisted of one repetition maximum tests for bench press and leg press, and isometric hand-grip, tandem gait, upper-body ergometer, and lower-body ergometer tests. Following T2, subjects were assigned to a creatine monohydrate (0.3 g kg body mass⁻¹ for 7 days) (CR: 63.31 +/- 1.22 year, 160.00 +/- 1.58 cm, 67.11 +/- 4.38 kg) or a placebo (PL: 62.98 +/- 1.11 year, 162.25 +/- 2.09 cm, 67.84 +/- 3.90 kg) supplementation group. CR significantly ($P < 0.05$) increased bench press (1.7 +/- 0.4 kg), leg press (5.2 +/- 1.8 kg), body mass (0.49 +/- 0.04 kg) and fat free mass (0.52 +/- 0.05) and decreased completion time on the functional tandem gait tests from T2-T3. No significant changes were found for PL on any of the measured variables. No adverse side-effects were reported by either group. Short-term creatine supplementation resulted in an increase in strength, power, and lower-body motor functional performance in older women without any adverse side effects.