

Effects of Creatine Monohydrate vs. Creatine Hydrochloride on Muscle Endurance Performance.

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Purpose: To compare the effects of creatine monohydrate (MH) to creatine hydrochloride (HCl) on muscular endurance performance. **Methods:** Eighteen male and female active individuals (age: 21±4 yrs, ht: 172.0±0.9 cm, wt: 72.3±14.9 kg) participate in the study. Subjects were randomly assigned into three groups: MH (20g/day MH), HCl (2g/day HCl+18g/day maltodextrin), and control (C) (20g/day maltodextrin). On day 1, subjects completed a 1-repetition maximum (RM) test for the squat and bench press exercise. On their second visit, subjects performed the same two exercises at 75% of 1-RM to failure (1:1 sec eccentric/concentric ratio). Subjects then supplemented with assigned treatment for one week. After a week, subjects performed the same exercise as the baseline. A 3x2 ANOVA for repeated measures was used to compare pre and post exercise performance by treatment. **Results:** The number of repetitions performed was significantly higher during post-test when compared to pre-test in all groups ($p<0.05$). However, no significant difference was found between groups for either exercise.

Group	Bench Press Repetitions			Squat Repetitions		
	Pre-test	Post-test	% Change	Pre-test	Post-test	% Change
MH (rep)	24.8 ± 8.1	25.8 ± 5.1	4.0%	25.9 ± 12.6	36.0 ± 17.1	43%
HCL (rep)	19.8 ± 5.8	23.8 ± 7.6	20%	28.8 ± 10.0	41.8 ± 13.1	45%
C (rep)	20.4 ± 4.9	22.0 ± 7.6	8%	27.6 ± 8.8	33.2 ± 11.5	20%

Conclusion: Short term supplementation of MH or HCl shows no significant effect on muscular endurance performance.