The Effects of Creatine Monohydrate and Creatine Hydrochloride Supplementation on Power in Trained Individuals

Packer, A., Whidden, MA., Stevens, WC., Klepfer, A., Reed, MA. West Chester University of Pennsylvania, West Chester, PA

Currently, there are no performance studies that compare the effects of creatine monohydrate and creatine hydrochloride (HCL). **PURPOSE:** The purpose of this study was to investigate how the supplementation of creatine monohydrate and creatine hydrochloride (HCL) affects performance on one repetition maximum (1 RM) lifts in the barbell back squat (BBBS), barbell deadlift (BBD), and the standing vertical Jump (SVJ). **METHODS:** Nine trained individuals entered the laboratory on day one to complete baseline testing for the study consisting of a 1 RM in the BBBS, BBD and SVJ. All participants supplemented with either creatine monohydrate (n=3), creatine HCL (n=4), or placebo (n=2). The creatine monohydrate group received two 5 g doses per day, the creatine HCL group received two 0.750 mg doses per day, and the placebo group received two doses of the placebo per day. After the six-day loading phase, all participants returned to the laboratory for post testing. **RESULTS:** No significant differences were found within each supplementation group from pre to post supplementation measurements for any of the three exercises ($p > 0.05$). The percent changes for the BBBS exercise for the creatine monohydrate, creatine HCL, and placebo groups were 2.44%, 1.54%, and 10.33% respectively. The percent changes for the BBD for the creatine monohydrate, creatine HCL, and placebo groups were 1.4%, 2.21%, and 6.67% respectively. The percent changes for the SVJ for the creatine monohydrate, creatine HCL, and placebo groups were 2.04%, 3.61%, and -2.15% respectively. **CONCLUSION:** These data suggest that neither form of creatine is helpful in increasing 1 RM lifts or SVJ height, over a supplementation period of six days, however, the very small sample size is a limitation of the study.