

# The effect of 12 weeks of L-arginine supplementation on Army Combat Readiness Test (ACRT) and anaerobic power in the military

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## Abstract

**Objective:** Maintaining combat readiness for the military is essential to improving the performance and ability to defend the country. L-Arginine supplementation has a positive effect on physical function. The aim of this study was to evaluate the effect of 12 weeks of L-arginine supplementation on Army Combat Readiness Test (ACRT) and anaerobic power in the military.

**Methods:** Twenty male military volunteers participated in the study and were randomly divided into two groups of 10 L-arginine and placebo. Before and 12 weeks after supplementation, subjects performed the ACRT and anaerobic tests. Data were analyzed using analysis of covariance (ANCOVA). Significance level was considered  $p \leq 0.05$ .

**Results:** The results showed that L-arginine significantly decreased the ACRT test time ( $P = 0.001$ ) and significantly increased anaerobic power ( $P = 0.027$ ) compared to placebo.

**Conclusions:** This study concludes that 12 weeks of L-arginine supplementation can increase combat power and increase anaerobic power and thus improve physical performance in the military.

**Keywords:** ACRT, L-Arginine, anaerobic power, military