

POSTER PRESENTATION

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Effect of supplementation of branched chain amino acids in muscle damage induced by resistance training

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Background

Analyze the effect of supplementation of branched-chain amino acid in muscle damage after resistance training measured by serum creatinine.

Methods

9 male individuals, aged between 20 and 35 years, weight lifters for at least 1 year, with a minimum of 4 times weekly frequency without nutritional counseling by a dietician, without the use of dietary supplements, medications or any condition diagnosed whatsoever. They exercised in the barbell bench press, leg press 45° and Extension Ankle (donkey) exercises, in that order. It was performed 3 sets of each exercise, with 2 minutes between sets and 30 seconds between exercises, charged to 85% of 1 RM and 6 repetitions in each series. 30 minutes before the execution of the exercises, the participants consumed 5g of ACR (2.5g of leucine, isoleucine 1.25g and 1.25g valine), or empty capsules (placebo). Blood samples were taken 30 minutes before (C1), immediately after (C2) and 30 minutes after training (C3) with a puncture of the median basilic vein.

Results

Statistical analysis was performed using ANOVA and t-student and significant difference was found between the ACR and Placebo groups ($p < 0.05$). On the consumption of ACR, values of serum creatinine were $0.2 \pm C1$ 1.17, $C2$ 1.24 ± 0.19 and $C3$ $1.18 \text{ mg / dL} \pm 0.21$ and Placebo 1.39 ± 0.31 , 1.57 ± 0.48 , $1.5 \text{ mg / dL} \pm 0.25$. With the administration of ACR, serum creatinine decreased by

27% in water samples which were collected immediately afterwards, and performed 30 minutes after exercise.

Conclusions

It may well be attributed to the BCAA the role of providing energy to skeletal muscle or decreasing muscle catabolism in resistance exercise.

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