The effects of HMB supplementation and resistance training on some component of physical fitness and body composition in non-athletes' young men

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Aim: Regarding important role of branched-amino acids to performance adaptation and specially amino acid leucine to improve performance gain, the aim of this study was to examine the effects of 8 weeks beta-Hydroxy-beta-methylbutyrate (HMB) supplementation with resistance training on some componenet of physical fitness and body composition in non-athletes young men. Methods: In a semi-experimental study, 20 non-athletes young men volunteered to participate for the study and divided into two groups and performed 8-week resistance training while supplementing with either HMB or placebo (3 g per day). The subjects were evaluated for 1 repetition maximum (1RM) bench press and leg press, vertical jump (VJ), anaerobic power (RAST) prior to and after training intervention. In addition, body composition variables such as percent body fat, WHR and BMI were assessed per and post training period. Results: Both the groups showed significant increases in 1RM bench press and leg press, VJ, and anaerobic power (RAST), and also the HMB supplementation group showed greater gains compared with the placebo. In addition, WHR did not change after training for both the groups, as percent body fat decreased significantly in HMB and placebo groups. BMI enhancements were greater for the HMB supplementation group indicated gains in body weigth. Conclusion: The results indicated that resistance training improved physical performance and HMB supplementation induced greater gains and therefore it could be recommend to coaches and athletes who use this supplementation to greater gains in physical fitness variabels.

Keywords : resistance training, supplementation, young, performance