

## **The Effect of Supplemental Isolated Weight-Training Exercises on Upper-Arm Size and Upper-Body Strength**

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The aim of this study was to examine the hypothesized additional training effect of programming isolated supplemental exercises in conjunction with compound weight-training exercises on muscle size and strength. Seventeen national-level baseball players volunteered to participate in this 10-week training study and were randomly divided into 2 groups. The control group completed a 10-week training program consisting of the bench press, lat pull-down, dumbbell incline press, and dumbbell 1-arm row exercises. The treatment group completed the same training program but with the addition of biceps curl and triceps extension exercises. A tape measure was used to record upper-arm circumferences, and a 5 repetition maximum (RM) was determined on the bench press and lat pull-down for each subject before and after training. Both the treatment and control groups displayed significant increases in upper-arm circumference (6.6 and 6.5%, respectively), 5RM bench press (21.4 and 22.1%, respectively) and 5RM lat pull-down (15.7 and 14.5%, respectively). There were no significant differences between the groups in the percentage change before and after training. The findings of this study suggest that isolation exercises are not necessary in order to increase compound movement strength or to increase upper-arm girth. These findings also suggest that strength coaches can save time by not including isolation exercises and still achieve increases in strength and size.