

MUSCULAR ADAPTATIONS FOLLOWING 8 WEEKS OF A MYOREPS SET CONFIGURATION VERSUS TRADITIONAL STRAIGHT-SETS IN RESISTANCE-TRAINED INDIVIDUALS

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NTRODUCTION

It has been proposed that the manipulation of acute training variables can maximize strength and hypertrophic adaptations (1). Previous literature has demonstrated the acute effects of altering the structure of a set by redistributing rest periods (2). However, the data investigating chronic responses in trained individuals is still limited (3).

PURPOSE

To compare the longitudinal effects of eight weeks of a Myoreps (MYO) set configuration versus traditional straight-sets (TRAD) on muscular hypertrophy in resistance-trained males.

METHODS

Thirteen resistance-trained males (one repetition maximum [1RM] : body mass [BM] ratio = 1.45) were randomly assigned to either a Myoreps group (n = 7) or a traditional straight-set group (n = 6). Subjects underwent an 8-wk upper-body RT program consisting of **Bench Press, Incline Bench Press, and Cable Chest Fly exercises** that were trained twice per week. The MYO condition began with a set to concentric failure using a 6-12 RM load, followed by 40 s rest. Subsequent cluster sets were then performed to a predetermined repetition number based on the repetitions achieved on the first set. **Cluster sets were separated by 20 s of rest and repeated until the** repetition target was unachievable with maximal effort. The TRAD group performed three sets to concentric failure with a 6-12 RM load on each exercise with 120 s rest between sets. Muscle thickness (MT) was assessed using B-mode ultrasonography at the belly (BMT) and lateral (LMT) portions of the pectoralis major at pre- and post-testing.

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Figure 1. Pectoralis Major Muscle Thickness (MT) Ultrasound Measurement.

Figure 2. Sum Muscle Thickness (mm) from pre- to post-intervention and Average Session Volume (kg) between conditions.

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RESULTS

A repeated measures ANOVA revealed only a significant time effect for MT, F (1,12) = 10.5, p < 0.05, (M = 0.68 mm, SE = 0.21). However, there was no statistical significance between groups. Additionally, subjects in the MYO performed significantly less volume compared to TRAD, t(195) = 13.2, p < 0.001; (M = 1165, SE = 84).

CONCLUSION

Our data suggest that strength training performed with a Myoreps set configuration produces a comparable hypertrophic response to traditional straight-set training. Despite the average session volume-load difference of ~1160 kg, changes in MT were comparable between conditions (Figure 2).

PRACTICAL APPLICATIONS

Within the context of muscle hypertrophy, utilizing a Myoreps set configuration may increase training efficiency by providing a similar growth stimulus with less total work done

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