For those short on time, aerobic, not resistance, exercise is best bet for weight, fat loss

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A new study led by North Carolina researchers has found that when it comes to weight- and fat loss, aerobic training is better than resistance training. The study is believed to the largest randomized trial to directly compare changes in body composition induced by comparable amounts of time spent doing aerobic and resistant training, or both in combination, among previously inactive overweight or obese non-diabetic adults.

The study is entitled "Effects of aerobic and/or resistance training on body mass and fat mass in overweight or obese adults." It is published in the December 2012 edition of the Journal of Applied Physiology published by the American Physiological Society.

Methodology

A total of 234 previously sedentary overweight or obese males and females, age 18-70 years of age, were enrolled in one of three eight-month supervised protocols: aerobic training (AT), resistance training (RT), or a combination (AT/RT). Of the total, 119 participants completed the trials and had complete data for the variables of interest in the article.

Those assigned to aerobic training exercised vigorously, at about 70-85% of maximum heart rate. They exercise approximately 45 minutes three

days per week throughout the study period.

Individuals assigned to resistance training also exercised three days a week, completing three sets of 8-12 reps on eight resistance machines that targeted all major muscle groups. Resistance was increased throughout the study to maintain a steady level of challenge as the participants gained strength.

Individuals who were assigned to AT/RT performed all the exercises assigned to both AT and RT groups. At the end of study each enrollee was assessed for weight, body composition, waist circumference, cardiopulmonary fitness and strength compared to their baseline.

Key Findings and Conclusions

The researchers found:

- The groups assigned to aerobic training and aerobic plus resistance training lost more weight than those that did resistance training only. In fact, those who did resistance training only actually gained weight due to an increase in lean body mass.
- Fat mass and waist circumference significantly decreased in the AT and AT/RT groups, but were not altered in RT. However, measures of lean body mass significantly increased in RT and AT/RT, but not in AT. The finding suggest that aerobic exercise is more effective in reducing these measures.
- Lean body mass increased with both RT and AT/RT, but not AT. Having the benefit to of both modes of exercise allowed AT/RT to decrease body fat percent significantly more than either AT or RT due to decreased fat mass combined with increased lean body mass.

Importance of the Findings

According to Leslie H. Willis, an exercise physiologist at Duke University Medical Center and the study's lead author, "Given our observations, it may be time to seriously reconsider the conventional wisdom that resistance training alone can lead to weight and fat loss."

Willis added, "If increasing muscle mass and strength is a goal, then resistance training is required. However, the majority of Americans could experience health benefits due to weight and fat loss. The best option in that case, given limited time for exercise, is to focus on aerobic training. When you lose fat, it is likely you are losing visceral fat, which is known to be associated with cardiovascular and other health benefits."

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