

## **THE EFFECTS OF WORKOUT- BASED COMBINATION OF AEROBIC AND RESISTANCE EXERCISE TRAINING IN OBESE ADULTS OF NORTHWEST ETHIOPIA**

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### **ABSTRACT**

*Obesity has reached epidemic proportion in developed and developing countries. Available evidences have shown that physical activity maintains a healthy body weight and lowers the risk of obesity. Given this, no sufficient evidence found to explain the effect of combining aerobic and resistance training (CART) in a workout on obese adults. The objective of the study was to evaluate the effects of CART in a workout on weight loss, anthropometric and body composition, blood and metabolic variables, aerobic and strength fitness. 70 obese Ethiopian adults (63M, 7F, age range: 33-56yr) screened and recruited for the study. Subjects randomly divided into intervention and control group. Aerobic exercises performed before resistance exercises in all time. Baseline and after 12 weeks test were done on weight, anthropometric, Body composition, fasting blood glucose and total cholesterol, blood pressure, VO<sub>2</sub>max and Total 1RM. Data was analyzed by SPSS statistical package software (version 16.0 for window). 85.7 % (n=60) of the participants (30 exerciser and 30 control) completed the study. The interventions showed significant ( $p<0.001$ ) reduction on body weight (6.1%), WC (3.8%), BMI (6.3%), percent body fat (11.6%), systolic (1.97%) and FBG (5.9%) and total cholesterol (4.3%). Significant ( $p<0.001$ ) greater increasing change resulted on Skeletal muscle (10.4%), running time (59.5%), VO<sub>2</sub>max (71.5 %) and total 1RM (26.3%). In conclusion, intervening CART for 12 weeks resulted significant improvement on weight loss, body composition and metabolic variables and cardio-respiratory and muscular strength in obese participants. Adhering to workout based CART gives the participant a chance to improve aerobic and strength capacity simultaneously.*