

ABSTRACT

COMPARISON BETWEEN TWO TYPES OF PHYSICAL TRAINING CONCERNING
THE BODY COMPOSITION OF OBESE ADOLESCENTS SUBMITTED TO A
MULTIDISCIPLINARY TREATMENT

Author: KĂLI OLIVEIRA DE SIQUEIRA

Adviser: PROF.DR.LUZIMAR RAIMUNDO TEIXEIRA

The objective of this study was to investigate the effects of two physical exercises programs applied to obese adolescents submitted to multidisciplinary treatment in order to establish which program is more effective to reduce body fat and increase lean mass in both gender. 60 obese adolescents aged between 15 and 19 years were selected, comprising 36 girls and 20 boys with body mass index (BMI) equal to or above the 95th percentile. The sample was divided into two groups: aerobic and strength. The adolescents were submitted to anthropometric, clinical, body composition and physical fitness evaluation. In addition, they were oriented to change their lifestyle and received nutritional, psychological and medical assistance. 60 minute physical exercise sessions occurred three times a week on alternate days. Body composition was evaluated by dual-energy X-ray absorptiometry (DEXA) twice: at the beginning and at the end of the program. The program lasted for 12 weeks. The main results show that both aerobic and the strength groups had significant reduction of body weight and of the BMI, and when analyzed by gender, no significant difference was observed among girls of both groups, while boys of the strength groups had a significant reduction. Lean mass increased significantly in the strength

group only. Participants of both physical training groups had significant reduction of their fat mass, percentage of total body fat and percentage of trunk fat. A positive correlation was established between the reduction in the percentage of trunk fat and the percentage of peripheral fat. In conclusion, strength training was more effective to increase lean mass. Considering the greater reduction in the percentage variation between the beginning and the end of the period, aerobic training was more effective to reduce the fat mass while strength training was more effective to reduce the percentage of total body fat of obese adolescents submitted to multidisciplinary treatment during twelve weeks.

Word-key: obesity, aerobic training, strength training, change in the lifestyle and DEXA.