

Integrating Nutrition and Physical Activity Program: Effectiveness in the Treatment of Obesity

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BACKGROUND/OBJECTIVES

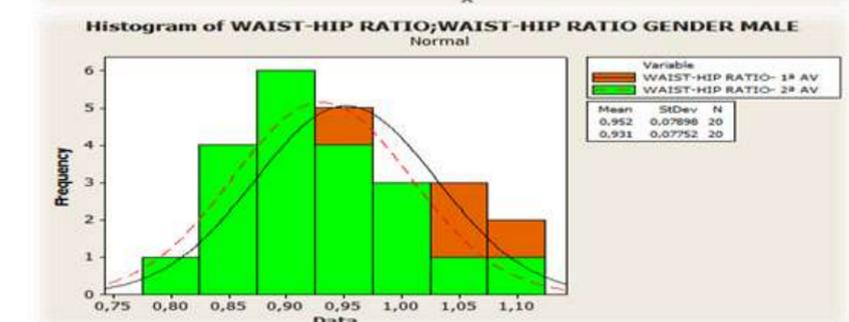
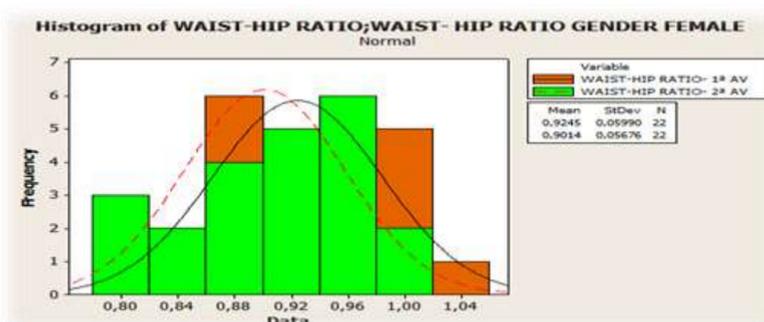
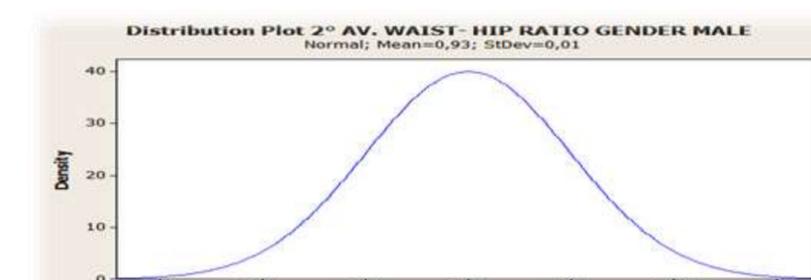
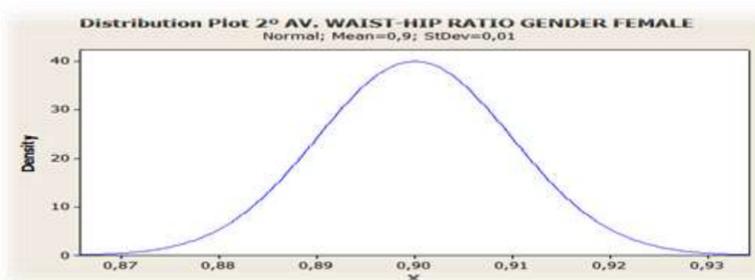
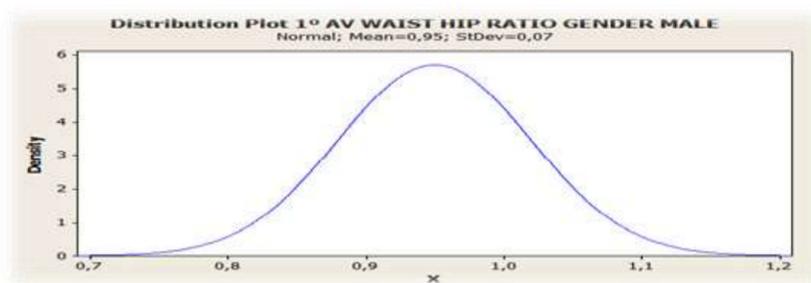
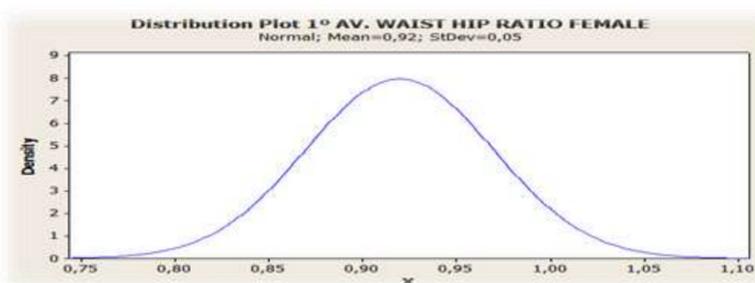
Obesity characterized by excess body fat and unbalance between food intake and energy expenditure (decrease in physical activity). Most studies have shown that increased waist-hip ratio (WHR) is a predictor of metabolic changes. The aim was to verify the effectiveness of 16 week program of resistance training for obesity participant.

METHODS

Observational, cross-sectional study of medical records of 42 participants (22 females (mean age= 49.5 years) and 20 males (mean age= 43.7 years), that came from the check up and after the first nutritional assessment with nutritionists and body composition analysis on bioimpedance (Inbody 370-05, 50, and 250 kHz), to train resistance and aerobic exercises with physical education teachers. It was observed the removal metal objects, two hours of fasting, emptying the bladder, 24 hours without practice exercise and sauna, keep five minutes in the standing position before body composition analysis. Height was measured by stadiometer Prime Med (0.80 to 2.20 meters). Cutoff points for WHR were considered second WHO definition: female ≤ 0.85 and male ≤ 0.90 . The resistance and aerobic exercises training were individualized, 2-3 times a week. Minitab Software was used for descriptive statistics and Probability Distribution Plot, Histogram and Scatterplot graphics.

RESULTS

Comparison of averages showed: female gender: body fat mass= 29.64 (StDev 10.22) against 28.31 (StDev 10.72); percent body fat= 0.3970 (StDev 0.0766) against 0.3840 (StDev 0.0833) and WHR= 0.9245 (StDev 0.0599) against 0.9014 (StDev 0.0568); male gender: body fat mass= 26.79 (StDev 11.12) against 23.94 (StDev 9.47); percent body fat= 0.2830 (StDev 0.0760) against 0.2616 (StDev 0.0690) and WHR= 0.9520 (StDev 0.0790) against 0.9310 (StDev 0.0690). Skeletal Muscle Mass was preserved.



CONCLUSIONS

We conclude that physical exercise are essential to perform with the diet (treatment of obesity), helping in negative energy balance and adjusting distribution of body composition, as well as the use of electrical bioimpedance to body composition analysis.