

Effect of 8 weeks combined training on quality of sleep, prolactin and growth hormones, aerobic and anaerobic powers of anxious overweight and obese teenager girls

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The aim of this study was to evaluate the effect of 8-week combined training (aerobic-resistance) on sleep quality, prolactin hormone, growth hormones, aerobic and anaerobic power of anxious overweight and obese teenager girls. Method: This study was quasi-experimental. In this study, 30 anxious overweight and obese teenage girls were randomly divided into two groups of 15 experimental group (age: $16/33 \pm 0/97$ years; BMI: $30/48 \pm 3/26$ kg/m²) and control group (age: $16/53 \pm 1/18$ years; BMI: $30/32 \pm 2/21$ kg/m²). The experimental group did 8-week progressive aerobic-resistance training 3 times a week. Each session consisted of 10-minute warm-up, 5-minute cool down, 30-minute aerobic exercise with 60-80% intensity of maximum heart rate and 45-minute resistance training with 50-70% intensity of maximum repetition. Before and after eight-week training, the quality of sleep, the rate of anxiety, aerobic power, anaerobic power, prolactin and growth hormone were measured. Statistical data was analyzed by one way ANCOVA and U Mann Whitney tests through spss version 22. The significant level $p \leq 0/05$). Conclusion: A period of combined training (aerobic - resistance) is likely to improve the sleep quality, aerobic and anaerobic power of anxious overweight and obese students and it is ineffective on prolactin and growth hormones.

Keywords : Keywords: aerobic exercise, resistance, physical fitness, sleep, anxiety, prolactin, growth hormone

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