

The effect of six weeks of Body Pump training and Melatonin supplementation on Growth hormones, cortisol and sleep quality in mature Girls

Poster Presentation

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Abstract

The aim of this study was to compare the effect of eight weeks of body pumping exercises with and without melatonin supplementation on growth hormone, cortisol and sleep quality in adult girls. In this regard, out of 55 adult girls, 50 were selected as volunteers. Then, 48 of them with an age range of 10 to 12 years and BMI (18 to 23 kg per square meter) were randomly divided into four groups including body pump training group, body pump training and melatonin supplementation, placebo group and control group. At the beginning and before the start of the research, all samples completed the personal satisfaction form in order to participate in the research. The device (body composition) was used to evaluate the body composition and their fasting blood samples were taken by a specialist for relevant examinations. The training protocol consisted of eight weeks and three sessions per week for 45 minutes with exercise overload and 48 hours of rest. The intensity of the exercises based on the overload was added to the amount of weights used and the variety of movements and speeding up the movements with the help of music. Which will initially start with 20-25% 1RM and in the eighth week 40-45% 1RM. The program will consist of 9 sections, each of which will last 4-5 minutes. Certain muscle groups will be used in each section. The melatonin supplement was taken in such a way that the supplement group received 3 mg of melatonin every night, 15 minutes before bedtime. Subjects in the supplement group all received the supplement at 21:30 and fell asleep at 22 (10 pm). Subjects were also instructed to take supplements. After the exercises, the test (body composition) and blood sampling were performed by a specialist and the necessary factors were measured in the laboratory. The results of repeated measures analysis of variance showed that sleep quality, serum growth hormone level and serum cortisol level in the exercise + supplement group were significantly increased compared to the other groups and the fat percentage was significantly reduced.

Keywords

[Body pump](#); [Melatonin](#); [growth hormone](#); [sleep](#)