

Effect of endurance-strength training on body composition and biochemical parameters of liver function in obese women

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Abstract The aim of present study was to investigate about the effect of endurance-strength training on body composition and biochemical parameters of liver function in women with abdominal obesity. The subjects of this study comprised two groups of participants, eight persons in experimental group (Age $N \leq 41.00 \pm 4.59$ and BMI $N \leq 32.13 \pm 2.44$) and ten persons in control group (Age 43.14 ± 3.80 BMI 33.38 ± 0.88). The experimental group participants practiced in six weeks endurance-strength training with favorite intensity (Training endurance with intensity 50-80% with maximum heart beat and training strength with intensity 75-95% 1RM) for ninety minutes, three sessions per a week. During this period, the control group did not participate in any training program ($p < 0.05$). Fat percentage, weight ($p = 0/001$), BMI ($p = 0/001$), WHR ($p = 0/009$), serum levels of AST ($p = 0/62$), ALT ($p = 0/46$), Bilirubin ($p = 0/75$) and direct bilirubin ($p = 0/56$) were measured before and after the 6 weeks of training. For measuring the percentage of subcutaneous fat used caliper, for measuring the height and WHR used tape measure, for measuring the weight used analog weighing scale and for measuring the enzymes serum used biochemical auto analyzer device. Kolmogorov-Smirnov test was used in order to make the interpretation of test results natural and for testing hypotheses, Paired t-test and independent t-test were used by SPSS software (version 22). ($05/0 > p$). Results showed that in experimental group compared to pre-test and post-test, there was a significant difference in body mass index, body fat percentage, BMI, and WHR. The AST, ALT and bilirubin decreased slightly but there was no significant difference. In conclusion, the findings showed that endurance-strength training has an impact on improvement of body composition and reduces the risk of fatty alcoholic liver in Women with fatty liver.

Keywords : Keywords: endurance-strength training, body composition, liver enzymes, ALT, AST, bilirubin.

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