Conclusion: despite improved glucose and insulin resistance, three months aerobic training does not affect serum TNF-α in type II diabetes patients. Therefore, improved insulin resistance and glucose can be attributing to the change in other hormonal or inflammatory mediators in response to exercise program.

123 THE EFFECT OF 12 WEEKS AEROBIC TRAINING WITH MODERATE TO SEVERE INTENSITY ON SERUM TNF-α AND INSULIN RESISTANCE IN MALES WITH TYPE II DIABETES

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Background and aims: Clinical studies support the role of inflammatory mediators in the relationship between obesity with insulin resistance and type2 diabetes. This study aimed to determine the effect of long term aerobic training program on serum levels of Tumor necrosis factor-alpha (TNF-α) and insulin resistance in males with type II diabetic.

Methods: For this purpose, thirty inactive adult obese men with type II diabetes were participated in study by accessible samples and divided into experimental (n=15) and control (n=15) groups by randomly. Then experimental subjects were participated in three months aerobic training program (3 times weekly) at 60–75 (%) of maximal heart rate and subjects in control group continued inactive lifestyle. To determine the effect of training program on serum TNF-α, fasting glucose and insulin resistance, fasting blood samples were collected before and 48 hours after lased exercise session. Independent T test used to compare variables between two groups at baseline paired T test to determine the effect of training program on independent variables.

Results: serum TNF-α did not significant change by three months aerobic training ($p=0.83$). Fasting glucose and insulin resistance decreased significantly after exercise program when compared with baseline ($p<0.05$).