

# **The effect of a period of intense aerobic exercise on inflammatory markers and liver enzymes with Silymarin supplement on inactive healthy young men**

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**Abstract Background and Purpose:** The aim of this study was to investigate the effect of short periods of intense aerobic exercise along with Silymarin supplement on inflammatory markers and liver enzymes on inactive men. **Materials and methods:** For this purpose, 40 healthy inactive young men who had not regular record activity in the last 3 months were voluntarily ed and then they were divided in four groups: supplementation (n = 10), training (n = 10), control (n = 10), dietary and exercise (n = 10 ). Exercising groups for four weeks and 3 sessions per week of aerobic exercise that began with 55-65% in the first week and 75-85% in the last week the maximum rate finished. Supplement groups ate daily 2tablets of 140 milligram Silymarins, one after breakfast and one after dinner. In order to measure changes in blood biomarkers, participants in two phases were taken: the first phase 24 hours after the first Ellestad protocol test and the second 24 hours after Ellestad protocol test at the end of the training protocol in fasting blood samples. To explain data was used Kolmogorov-Smirnov test and for comparison between groups, paired t-test to compare the mean changes before and after inside groups ( $p>0/05$ ), and 16spss software was used. **Results:** The results suggest that Silymarin reduces the CPK concentration in the supplement ( $p=0/30$ ) and workout supplement ( $p=. /38$ ) but was not statistically significant between the groups. The reduction in ALT index into practice group ( $p=0/09$ ), but there are not significant results between the groups. There is no significant differences in pre and post-test between the groups into index of LDH ( $p=0/61$ ) and AST ( $p=0/73$ ) .Also, vo2max and subcutaneous adipose tissue ( $p=0/10$ ) and fat-free mass ( $p=0/53$ ) and showed significant changes into groups.

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**Conclusion:** It seems that Sili and practice will increase vo2max and reduce the subcutaneous fat and increase the free-fat mass. On the other hand, exercises with the use of Silymarin may reduce inflammatory markers, but probably have no effect on liver enzymes.

**Keywords :** Keywords: intense aerobic exercise, inflammatory markers, liver enzymes, body composition, vo2max

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