

## FIBRINOGEN CHANGES IN PROFESSIONAL MALE SOCCER PLAYERS AFTER AN OFFICIAL SOCCER MATCH.

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### Introduction

Football is a dynamic and challenging sport. The purpose of this study was to examine changes in Fibrinogen caused by an official soccer match in professional male players.

### Methods

Forty-two males participated in the study. Twenty-two professional soccer players [23.14±2.97 yrs; 180.91±6.12 cm; 75.96±5.77Kg; 10.60±0.62%; 12.59±2.89 yrs; for age, height, body mass, % body fat, and training experience, respectively; mean±SD] constituted the experimental group, while the other 20 constituted the control group. Venous blood samples were taken before, immediately after as well as 24 and 48 hours after a soccer match that was played by the experimental group while the control group abstained from physical exercise.

### Results

The results of the 2 x 4 (Groups x Measures) ANOVA with repeated measures on the last factor revealed significant differences for Measures ( $F_{3,120} = 386.28$ ,  $p < 0.001$ ) and Groups by Measures interaction ( $F_{3,120} = 373.17$ ,  $p < 0.0001$ ). Bonferroni post hoc analysis showed that soccer players had (a) significantly lower concentration of Fibrinogen (i) before the match ( $M = 247.86 \pm 30.02$ ) compared to concentration immediately after ( $M = 289.77 \pm 35.83$ ), 24 hours ( $M = 400.95 \pm 57.42$ ), and 48 hours ( $M = 279.88 \pm 35.60$ ) after the match, and (ii) immediately after the match compared to 24 hours after the match, and (b) significantly higher concentration of Fibrinogen immediately after and 24 hours after the match compared to concentration 48 hours after the match. Moreover, soccer players compared to control participants had lower concentration of Fibrinogen at first measure ( $M = 247.86 \pm 30.02$ ,  $M = 290.25 \pm 34.48$ , respectively) and higher concentration at third measure ( $M = 400.95 \pm 57.42$ ,  $M = 292.60 \pm 36.01$ , respectively).

Table 1. Fibrinogen (mg/dl) means and SD ( $\pm$ ) for Groups as a function of Measures after an official soccer match

Ομάδες	Before	Immed. after	24 hours	48 hours
Control	290.25±34.48	292.20±33.84	292.60±36.01	292.90±34.09
Soccer players	247.86±30.02	289.77±35.83	400.95±57.42	268.05±41.26

### Conclusions

The results show that an official soccer match entails significant changes in Fibrinogen concentration. This suggests that training regimes following a soccer match should be appropriate in order to restore Fibrinogen levels of the players.