

# **The effect of a growing aerobic exercise on salivary cortisol level in the men basketball warm and cold environments**

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**The effect of a growing aerobic exercise on salivary cortisol level in the men basketball warm and cold environments Abstract: The present study examined the effect of a session of increasing aerobic activity on salivary cortisol levels and aerobic power of basketball men in two warm and cold environments. 10 basketball players form young men between 18 to 25 years old with 3 years of basketball activity form gymnasiums in Rasht volunteered to participate in the study. Independent variable of increasing aerobic exercise in both warm and cold environments and dependent variable are changes related to salivary cortisol aerobic power. The subjects in the first turn had one session of increasing aerobic activity, including a Bruce test, in an environment of 10 °C as a cold environment and one week later, the subjects performed the same activity in an environment with a temperature of 30°C as a hot environment they made. Salivary cortisol samples were obtained participants in three stages. The data was analyzed to verify the nature of the data the Shapiro-Wilk test and to check the homogeneity of Levene variances as well as the repeated-measures ANOVA to investigate the intra-group variation and the covariance analysis test to examine the group difference at the significance level were used  $P \leq 0/05$ . Descriptive statistics of mean, standard deviation, and graphs were used. Overall, the results showed that an aerobic exercise session in warm weather caused a significant change in the level of salivary cortisol in men basketball players  $P > 0/05$ . Also, an intensive training session in cold weather causes a significant change in the level of salivary cortisol in men basketball players  $P > 0/05$ . Finally, there was a significant difference between salivary levels of men basketball players after an increasing training session in both warm and cold weather. According to the results, it can be concluded that exercise in warm and cold environments increases salivary cortisol which can cause**

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changes in the immune system.

**Keywords : Keywords: Warm environment, cold environment, exercise, salivary cortisol**

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