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Analysis of body heat and perspiration of squash players before and after match

■ **GAURAV SINGH KUSHWAH AND** PRADEEP ASTEYA

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■ **ABSTRACT**

In the modern competitive scenario, sports and sportspersons are striving continuously to excel over the other, so we must understand that it is important to maintain the performance of a player at top level while, at the same time eliminating the dangers of heat illness. We should realize first the basic physiological mechanism prevailing in heat illness and second, how the environmental or weather conditions can significantly contribute to heat illness. This paper investigates to compare the effect of squash racket game on the body temperature and sweating rate on university level squash players before and after the match. The study was restricted to eight male subjects aged 20.7±2.3 years. All were university level sportsmen from Lakshmibai National University of Physical Education, Gwalior. The data were recorded before and after the matches played in league pattern. A total of 28 matches were conducted and each individual played 7 matches. In all, the average score of all 7 performances were considered as the final data of the individuals. The data were collected on the body temperature and sweat rate. In order to analyze the data obtained, paired't' test was employed and the level of significance was set at 0.05. The results revealed that the group lost significant amount of sweat, which is related to increase in body temperature and decrease in body weight.

■ **Key Words :** Body heat, Perspiration, Squash players

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See end of the article for authors' affiliations

GAURAV SINGH KUSHWAH
Lakshmibai National University of Physical Education, GWALIOR (M.P.) INDIA

In the modern competitive scenario sports and sportspersons are striving continuously to excel over the other, so we must understand that it is important to maintain the performance of a team at top level while, at the same time eliminating the dangers of heat illness. We should realize first the basic physiological mechanism prevailing in heat illness and second, how the environmental or weather conditions can significantly contribute to heat illness. Like most other aerobic sports, squash requires a high level of physical fitness, fluent bodily movement, sound gross and fine motor control (Todd *et al.*, 1996). Squash, like any other sport, at a high level, might be challenging to the human body and all the physiological bodily systems, because of the high intensity it is played at. The conditions within a squash court may be hot and humid, and continuous movement for both players on a squash court may increase the challenge on the body, especially the thermoregulatory system (Brown and Winter, 1998). There are no clear and descriptive guidelines for fluid replacement in squash, even with the high number of players participating in the game of squash. It has been difficult to characterize the physiological responses to a sport like squash, due to laboratory settings not lending themselves to examining activities, which require variation in movement and the use of space (Doherty and Howe, 1978). Khanna *et al.* (2005) suggested that sweat loss in high intensity, short duration exercise are small, but exercise capacity is impaired if there is a pre - exercise fluid deficit.

Body temperature elevations elicit heat loss responses