



Short Communication

Study of Body Temperature and Sweating of Basketball Players

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Abstract

The Purpose of the research is to detect the impact of Basketball on body heat and sweat on inter-college level players. The body temperature and body weight of the players are taken in the pre and post basketball match. The subjects of the study are twenty five basketball players with in age of 18 to 23 years. All players are different colleges of C.D.L.U, (Sirsa). They participate in inter-college basketball tournament session 2012-2013. The data is collected in inter-college tournament. The 'T' test is in use to evaluate between pre and post result. The 'P' value is in use to find significant different between pre and post result. The level of significance value is in use is 0.05. For analysis and interpretation of the collected data, there is significant difference in body temperature and body weight in the pre and post basketball match. Body weight decreases significantly after the match which in turn indicates a significant increase in the sweat amount.

Keywords: Body weight, body heat, sweat, basketball, inter-college level players.

Introduction

Every player are energetic by natural world and expect for brilliance in all physical act. Every college desires to illustrate their superiority by other colleges¹. This test excite, encourage and stimulate all the college to sweat and struggle to run fastest, jump highest and greatest power, stamina, and skilfulness in the present aggressive sports¹. Aggressive sports presentation of the sportsmen depends upon physical condition, method based upon diet, technical principles, technical training programmer etc. but the different environmental situations like warm, cold, height above sea level and moisture also have a wonderful influence on the presentation of the sportsmen¹.

Most people think of a "normal" body temperature as an oral temperature of 37°C (98.6°F)². This is an average of normal body temperatures². Your temperature may actually be 0.6°C (1°F) or more above or below 37°C (98.6°F)². Also, your normal body temperature changes by as much as 0.6°C (1°F) throughout the day, depending on how active you are and the time of day². When extreme heat is created in the body by work out, the rectal heat can rise to as high as 101⁰ to 104⁰F².

Heatstroke occurs when the body fails to regulate its own temperature and body temperature continues to rise². Symptoms of heatstroke include mental changes (such as confusion, delirium, or unconsciousness) and skin that is red, hot, and dry, even under the armpits².

Classic heatstroke can develop without exertion when a person is exposed to a hot environment and the body is unable to cool itself effectively². In this type of heatstroke, the body's ability to sweat and transfer the heat to the environment is reduced². A person

with heatstroke may stop sweating². Classic heatstroke may develop over several days². Babies, older adults, and people who have chronic health problems have the greatest risk of this type of heatstroke².

Exertional heatstroke may develop when a person is working or exercising in a hot environment². A person with heatstroke from exertion may sweat profusely, but the body still produces more heat than it can lose². This causes the body's temperature to rise to high levels².

Methodology

Method: The body temperature and body weight of the players is taken in the pre and post basketball match. The players for this study are twenty five basketball players with in age of 18 to 23 years. All players are different colleges of C.D.L.U, (Sirsa). They participate in inter-college basketball tournament session 2012-2013. The data is collected for each variable by administer their individual tests. The body temperature and body weight of each player is taken before the basketball match and again the body temperature and body weight is taken after the basketball match to measure the sweat amount loss and rise body heat during the basketball match, thermometer for body heat and body weight method for sweat loss is used (AIS Nutrition Department)¹.

Results and Discussion

Result: The data is composed and analyzed to illustrate a conclusion on control on body temperature and also on sweat, and the scores are given bellow.

Data of Basketball players on body temperature and on Sweat rate.

Table-1

Variables	Mean		Standard Deviation	
	Before Match	After Match	Before Match	After Match
Sweat Loss	60.500	58.301	2.340	1.185
Body Heat	36.336	38.156	0.597	0.518

* .05 (level of significance)

Table- 1 shows that mean of sweat rate for pre data is 60.500 and standard deviation of pre data is 2.340. The mean of sweat rate for post data is 58.301 and standard deviation of pre data is 1.185. The mean of body temperature for pre data is 36.336 and standard deviation of pre data is 0.597. The mean of body temperature for post data is 38.156 and standard deviation of pre data is 0.518.

The mean scores of before and after match data on sweat loss and body heat is being represented graphically in Figure-1

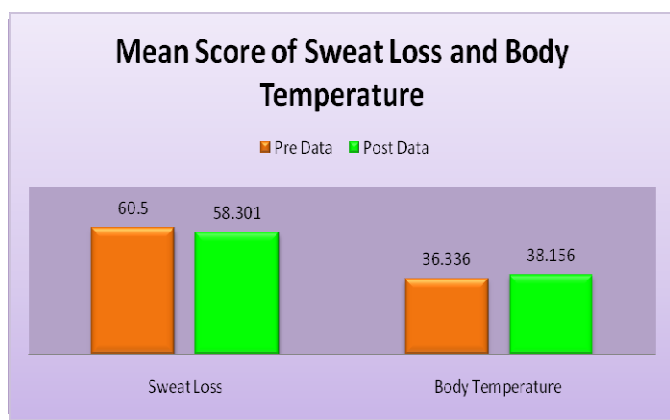


Figure – 1

Comparison of mean difference, standard error difference, T and P value of sweat rate between before and after match data at inter-college level of Basketball players

Table-2

DF	Mean Difference	SED	T	'P' value
24	2.19	2.27	4.82	0.00

* .05 (level of significance)

According to table –1, the mean difference of sweat rate is 2.19 between before and after match data at inter-college level of Basketball players, the SED of sweat rate is 2.27 between before

and after match data at inter-college level of Basketball players. P value 0.00 is found is lesser than 0.05 thus indicating that there is significance difference among basketball players before and after the match in term of sweat rate.

Comparison of mean difference, standard error difference, T and P value of body heat between before and after match data at inter-college level of Basketball players

Table-3

DF	Mean Difference	SED	T	'P' value
24	-1.82	0.604	-12.364	0.000

According to table –1, the mean difference of body temperature is -1.82 between before and after match data at inter-college level of Basketball players, the SED of body temperature is -0.60 between before and after match data at inter-college level of Basketball players. P value 0.00 is found is lesser than 0.05 thus indicating that there is significance difference among basketball players before and after the match in term of body temperature.

Conclusion

The analysis of data also shows that there was significant difference in sweat rate between pre and post the basketball match. The analysis of data also shows that there were significant differences in body temperature between pre and post the basketball match. Although body heat would have increased during the early part of the basketball match, after the basketball match it come down to the same level as sooner than the basketball match. It may be due to the evaporative sweat which cools down the surface temperature of the body. The body temperature is related to the ambient temperature.

References

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