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Effect of SIT-UPS on high and low temperature

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Abstract
In the pre historic times, physical fitness was the key element for the survival of a human being. People during those times were confronted with the hostile environment and only fit individuals could survive. Hence, survival of the fittest was the dictum. Even the civilization of Sparta, Athens and Rome in the history of the world have stressed physical fitness or physical training as an important objective of the educational programme. Graves found relationship of speed with physical self, social self and total personality and strength with the physical self, while total score of physical attributes correlated with physical self, social self and total personality.
Sample of the Study: The subjects chosen for the study were male student, Football boys, Mahilpur. Consisted of 15 subjects. The ages of the subjects ranged from 18-22 years.
Hypothesis: It is hypothesized that there may not be significant difference between high and low temperatures on fitness component.
Variable: Motor performance of Boys of 18 to 22 years of age at different age levels will be taken by applying Motor fitness variable i.e. sit-ups.
Statistical Analysis: The data collected in test was statistically compared by using 't' test. The level of significance chosen was 0.05.

Keywords: Physical Fitness, sit-ups.

Introduction
Generally speaking, people in civilised communities are lacing both in strength and endurance because of the artificial life encouraged by modern civilisation, in which life is made as soft and easy as possible, with physical effort diminished to a minimum. The average man plays more man hours of attention to his car (which he can serviced or replaced anyway) then do his own machine – his body (which is irreplaceable). The physical fitness of the average executive is so low that his next promotion may kill him! Solely because he will be unable to stand the added pressure and the new responsibilities of his promotion. Physical fitness is required for an average man. His target is not to become a highly trained athlete, but to be able to carry out his life feeling that good health is with him, that he processes an inner consciousness of his ability to run up an escalator or to chase a bus without having to take a long time to recover
Very little evidence is available concerning the effects of cold weather on aerobic capacity with a normal core temperature. However, based upon the information presented in the above paragraphs, it would be logical to assume that there would be no effect on aerobic capacity. Matsui et al. have reported just that. There were no significant changes in aerobic capacity over the course of an entire year. Subjects were tested two times each month for an entire year, once at the ambient temperature (ranging from 3^0 C to 25^0C) and once at a constant room temperature of 18^0C. Subjects were also tested in a climate-controlled chamber at 5^0C, 18^0C, and 35^0C. At no time were there any meaningful differences in maximal oxygen consumption.
Hence core temperature is lowered by submersion in cold water followed by a standard maximal test the results are different.

Material and Method
Selection of Subjects
The research scholar chose 15 male students of S.G.G.S Khalsa College Mahilpur, male inter-college students. The age level of the subjects ranged from 18 – 22 years.

Criterion Measure
The performance of the subjects in sit-ups was taken as a criterion measure for the study. The following measure was: -

Sit-ups
The number of completed bent knee sit-ups in one minute more recorded to the nearest whole number.

Test Administration
The tests were administered to the subjects at their respective playgrounds by the researcher himself with the help of a few assistants. The subjects were allowed to warm up on their own before the actual performance. They were instructed to warm up on their own before the actual performance. They were instructed to do their best. Each subject got one change.

Sit-ups
Equipment: Mat

Description
The subject were asked to lie down on their back on the mat, with hands placed on their back of neck with finger interlocked. The partner was asked to hold the ankles down. The knees were bent. The subject was asked to lift body up to chest touches the knee then back to starting position. The exercise was continue up to 60 seconds.

Rules

1. The fingers reminded in contact behind the neck throughout the exercise.
2. Sit up was continued for 60 second without any break in between.

Scoring

Number of correctly executed sit-ups performed in one minute was recorded as the score.

Level of Significance

For testing the difference between the mean of high and low temperature in motor fitness component, the level of significance was set at .05 level.

Findings

The data collected was statistically analysed by 't' test and results of the various groups are presented in Table 1.

Table 1: Difference of Means Between high and low Temperature of Sit-ups

S. No.	Variables	Mean		Mean Difference	Standard Deviation		DM	't' Ratio
		Cold	Hot		Cold	Hot		
1.	sit-ups	32.53	32.87	0.34	2.15	2.36	0.81	0.42

Significant at .05 level

The 't' value required for significant with 14 d.f. was 2.145
The under mentioned formula was to find out the different of means between cold and hot temperature.

$$t = \frac{d}{s/\sqrt{N}}$$

It is evident from the Table 1 that there is significance difference between the high and low temperature,

Conclusion

It is evident from Table 1 that there was insignificant difference between high and low temperature in bent knee sit-ups (.42). It can be revealed that there is no difference between high and low temperature in sit-ups motor fitness component. Probably the reason could be that all the subjects taken for the study were the professional physical education students undergoing the same training programme which might have brought insignificant difference between high and low temperature.

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