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DIFFERENCE BETWEEN THE BLOOD PRESSURE OF HIGH ALTITUDE AND LOW ALTITUDE SCHOOL GOING CHILDREN

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Short profile

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ABSTRACT

Living at or traveling to high altitudes can raise a person's blood pressure, depending on the rate of ascent and the amount of time spent at the high altitude. The International Society of Mountain Medicine describes high altitude as 5,000 to 11,500 feet above sea level. At higher altitudes, the body works harder to process oxygen. This stress can cause high blood pressure. But the more time a person spends at the higher altitude, the better acclimatized the body becomes.In the November 2009 issue of the "Journal of Travel Medicine," Dr. Timothy O'Brien and colleagues reported on a study that found a group of black mountaineers experienced a drop in their systolic blood pressure numbers as they climbed to high altitude. Systolic pressure is the amount of force placed against the body's arterial walls when the heart contracts. It is designated by the top number in a blood pressure reading. However, the systolic pressure of White Mountain climbers increased as they ascended. The cause of the racial differences is unknown and may not apply to all individuals. The authors speculated that the observed differences seen in this small study may have been due to differences in genetics, hypoxic stress, diet and exercise.

It is pertinent to mention that this study was undertaken on the subjects from the 26 students of SURU valley public high school Kargil at high altitude and on 26 students from Green-Land public school Ganderbal at low attitude. The subjects chosen were between the 14-15 years of age &

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there was no significant difference found in their blood pressure after employing all the tools and procedures for the appropriate measurement. Furthermore to further validate the results the study of Kascovich (1971) was been consulted in which he says that the blood pressure does not make much difference until after the age of 40 years.

KEYWORDS: - *Altitude, Blood Pressure, Acclimatization.*

INTRODUCTION

The impacts of atmosphere and elevation on easygoing circulatory strain are inspected from the points of view of introductory presentation, acclimatization, long haul protection and origin. Hot and muggy atmospheres aggregate to lightly affect circulatory strain, despite the fact that a slight decrease might be found in some normally acclimatized gatherings. Introduction of the aggregate body to mellow frosty moreover has little impact. Nearby presentation of the limits to serious old event's critical increments in pulse amid introduction however not at different circumstances. Acclimatization decreases yet does not dispense with that reaction. The impacts of elevation on circulatory strain or variable. These are beginning hypertension took after by progressive standardization. Following quite a while of living arrangement at high elevation circulatory strain may really be lower than that saw among occupants at bring down height. High height influences the human frameworks, which assistant influences the working of human body under various conditions. In the field of physical instruction and games, high elevation preparing involves awesome place of significance. High elevation preparing puts additional weight on the working of human body frameworks. The high elevation preparing appeared when competitors dwelling on high height performed superior to the competitors who were living on low elevation in long separation running. For continuance exercises sports trannies began preparing the competitors at high height in the wake of mulling over valuable impacts at high elevation. Competitors from Kenya who outflanked the competitors of different nations in long separation races at Sidney Olympics are a decent reference about the advantage of high height preparing.

There are such a significant number of contrasts found between the general population who inhabit high height and low elevation. The general population living at high height contrast in numerous angles from individuals living at low elevation mostly in their work, systems in their day by day schedule. Their day by day routine is extremely intense. The ecological factors, for example, atmosphere regular assets and social set up assume an indispensable part in molding the physical wellness. The general population living in high elevation need to buckle down as contrasted and individuals living in low height. Because of contrast in elevation individuals vary in physiological angles and also in bimolecular parts of the body. The distinction in their physiological and in addition in their biochemical make-up is because of the distinction in the fractional weight of oxygen which is diverse at various elevations.

STATEMENT OF PROBLEM

- To find out the difference between the blood pressure of high & low altitude school going children.

OBJECTIVES OF THE STUDY

The proposed objectives of the present research were follows:

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- To find out the variation in the blood pressure between the high and low altitude subjects
- To find out the resting heart rate of the high and low altitude subjects.

Limitations of study

- The hereditary and potential of students was not under the control of researcher.
- The Socio-economic status and political situations was not taken into consideration.
- Interest of subjects towards assessment was not known.
- Climatic condition was not under the control of researcher.

MATERIALS AND METHODS

SUBJECTS

The persuasive sample of 52 students was taken from two schools. There were 26 students from SURU Valley Public High School Kargil at high altitude and 26 students Green-Land public school Ganderbal at low altitude.

TOOLS USED

Sphygmomanometer: For measuring blood pressure
Bench: 20" for Harvard step test.
Metronome: for creating rhythm for up and down steps.
Stop watch: for measuring time.
Stethoscope: Analyzing the sound of heart

STASTICIAL ANALYSIS

T test was employed to find out the significance of the difference and direction of the difference
RESULTS

TABLE 1 MEAN DIFFERENCES BETWEEN STUDENST OF HIGH AND LOW ALTITUDE ON BLOOD PRESSURE

Variable	High Altitude (N=26) M±SD	Low Altitude (N=26) M±SD	SE	T
Systolic Blood Pressure	109.25±7.80	107.86± 11.79	2.92	1.93
Diastolic Blood Pressure	77.55±4.88	70.34±10.23	2.42	1.54

- T.051544=2.02

This table showing the mean value of systolic blood pressure 114.25 and 107.86 at low and high altitude living students respectively and standard deviation at low and high altitude is 7.80 and 11.79 standard error value is 2.98 and t value is 1.93 which showed no significant difference between high and low altitude students as it is less than required tabulated value of 2.02 at 0.05 level of confidence. The mean value of diastolic blood pressure at high altitude is 77.55 and 73.34 respectively and standard devotion is 4.88 and 10.20 respectively the standard error value was 2.41

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and t value is 1.52 which showed no significant difference between high and low altitude students on diastolic plod pressure as it is less than the tabulated value of 2.02 and 0.05 levels of confidence

DISSCUSSION

There was no significant mean difference between high and low altitude students on blood pressure. It may be attributed to the fact that the sample taken was of the average age of 14-15 years of age according to **Kascovich(1971**) has highlighted that the blood pressure does not make much difference until after the age of 40 years

CONCLUSION

There was a little effect of high and low altitude on blood pressure mean difference on girl students at school level age ranged 14-15 years as measured by sphygmomanometer in mm/Hg

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