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## Impact of morning conditioning program on different physiological variables of male students

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### Abstract

The main purpose of the study was to find out the effect of morning conditioning programme on different physiological variables. The subjects were selected from the College of Vidarbha Institute of Science & Humanities, Amravati. Forty male selected as subjects for this study. The Subjects was selected by using simple random sampling method. The data collected on 40-male subjects before and after six week morning conditioning program on blood pressure, Hemoglobin percentage, pulse rate and exhale capacity was analyzed by comparing the means of pre and post test of experimental group and was again statistically analyzed by applying 't'-test to check the significant difference among selected variables. Results revealed that there was no significant effect on the systolic blood pressure and hemoglobin of subjects through the statistical analysis after six weeks morning conditioning programme. There was significant effect on the diastolic blood pressure, pulse rate and exhale capacity of subjects through the statistical analysis after six weeks morning conditioning programme.

**Keywords:** Conditioning Program, Physiological, Exhale Capacity, Pulse Rate, Hemoglobin, Blood Pressure.

### Introduction

Human body is like a complex and delicate machine, which comprises several small parts. A slight malfunctioning of one part leads to breakdown of the machine. In a similar way, if such a situation arises in human body, it also leads to malfunctioning of the body. Exercises can play a significant role in keeping the society, community and nation, wealthy. If the citizens of a country are healthy, the country is sure to touch heights in every fact of life, and the country healthy generation can change highest mark in various fields and thereby enable their country to win laurels and glory at the international level. So, if we get proper education regarding health, every one of us can contribute towards the upliftment of the country.

Every one performs exercise in order to sustain life. However, the amount varies from person to person based on their personal lifestyles and other factors. 'Exercise' is one of the healthy life, style which contributes to optimum health and quality of life. People who exercise regularly can reduce their risk of death and active people increase their expectancy by two years compared to inactive people. Good health adds to the quality of life. Regular exercise and good physical fitness enhance the quality of life in many ways. Physical fitness and exercise can help us to look good, feel good, and enjoy life. Exercise provides an enjoyable way to spend leisure time.

Exercise is a bodily movement performed in order to develop or maintain physical fitness and overall health. Exercise is any bodily movement that leads to physical exertion of sufficient intensity, duration and frequency to achieve or maintain fitness, or other health or athletic objectives.

Benefits of regular exercise can be divided in two parts-psychological benefits and physical benefits.

Psychological benefits of regular exercise are as follow: 1) It increases perceptions of acceptance by others; 2) It decreases overall feelings of stress and tension; 3) It reduces frustration with daily "hassles"; 4) It pays more constructive responses to disappointments and failures; 5) Exercise is the most profound and immediate stress reducer; 6) It not only dissipates "nervous energy" but directly influences the relaxation response; 7) Regular exercise actually decrease the level of stress hormones released during stressful responses such

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as anger and fear; 8) Exercise can effectively be used as a preventive measure since it minimizes or neutralizes physical arousal to non-physical threats; 9) It improves self-esteem; 10) It improves sense of self-reliance, self-confidence and self-efficacy.

Physical benefits of regular exercise are as follow: 1) Exercises increase efficiency of heart (heart pumps more blood with each stroke); 2) They decrease muscle tension; 3) They help in weight management.; 4) They increase endurance; 5) They provide better quality of sleep and reduce fatigue; 6) Exercises decrease bone demineralization; 7) They increase tolerance to heat and cold; 8) They decrease resting heart rate; 9) They improve recovery time (heart rate returns to its resting level faster); 10) They decrease resting blood pressure; 11) They make better appetite regulation; 12) They decrease cholesterol and triglycerides; 13) They decrease body fat and increase muscle bulk and tone (Tripathi and Srivastava, 2012) [9].

The training is defined as an organized instruction, a teaching learning process (repetitive practice of skills) aiming at performance enhancement in any field of human activity precisely. Precisely, it is a methodical way of preparing oneself to achieve some pre-determined goals. A soldier trains to fight in war, a teacher trains to communicate things to students, a pilot trains to fly an aero plane, a mechanic trains to repair an automobile and on athlete trains to run marathon or play soccer etc. in each acquisition course, which includes learning, practice and testing procedures enabling the trainees to be qualified and competent to handle the specific jobs successfully (Kamlesh, 2009) [5].

The proper approach to starting an exercise programme is to determine and set realistic fitness goal, find an activity or activities well suited to help us meet those goal and to our personal need or interest and then pursue those goals conscientiously and sensibly. Participation in well structural exercise programme enables more exercise to become training (Klug *et al.*, 1998) [6].

**Statement of Problem**

“Impact of Morning Conditioning Program on Different Physiological Variables of Male Students”.

**Purpose of the Problem**

The main purpose of the study was to find out the effect of morning conditioning programme on different physiological variables. Some allied objectives of the study are as:

1. To find out the exhale capacity of college students.
2. To find out the pulse rate of college students.
3. To find out the Hemoglobin of college students.
4. To find out the blood pressure of college students.
5. To find out the effect of morning conditioning programme on exhale capacity.
6. To find out the effect of morning conditioning programme on pulse rate.
7. To find out the effect of morning conditioning programme on Hemoglobin.
8. To find out the effect of morning conditioning programme on blood pressure.

**Methodology**

**Source of Data**

The subjects were selected from the College of Vidarbha Institute of Science & Humanities, Amravati.

**Selection of Subjects**

Forty male Subjects of College of Vidarbha Institute of Science & Humanities, Amravati would be selected as subjects for this study.

**Sampling Method**

The Subjects was selected by using simple random sampling method.

**Equipment used for Collection of Data**

Under given equipments was used for the collection of data.

1. **Blood pressure:** Sphygmomanometer was used to measure the blood pressure.
2. **Hemoglobin:** Hemoglobin percentage of the subjects was measured by using Hemoglobin apparatus (Sahli's Hemometer)
3. **Pulse rate:** Stopwatch was used for counting the pulse rate of the subjects.
4. **Exhale capacity:** Peak Flowmeter was used to measure the exhale capacity.

**Weekly Morning Conditioning Programme Schedule**

Day	Duration (min.)	Conditioning Task	Conditioning Means and Method	Distance (Km.)	Intensity
Monday	25	Basic Endurance	Continuous Running	2	Medium
	5	Relaxation	Walking and Jogging		
Tuesday	30	Basic Endurance	Continuous Running on road	4	Low
	15	Strength Exercise	Stretching Exercise (Triceps, Biceps, Calf muscles, etc.) Neck, shoulder, hip, ankle rotation etc.		
Wednesday	25	Basic Endurance	Continuous Running along the road and over the hill.	4	Medium
	15	Strength Exercise	Triceps, Side wing, Hamstring, Quadriceps, Calf muscles, Abdominal forward and backward lean.		
	10	Relaxation	Easy Walking and Jogging		
Thursday	05	Speed, Strength, Endurance	General Warm-Up, 100m, 200m run.		
	30	Basic Endurance	Running and walking	4	
	10	Relaxation	Limbering Down, Easy Walking and Jogging	1	
Friday	25	Basic Endurance	Continuous Running with changing speed	4	Low, Medium, Fast
	10	Agility Development	Hopping Alternate high knee action, twisting on the exercises		
	05	Relaxation	Limbering Down, Easy Walking and Jogging		
Saturday	20	Basic Endurance	Continuous running	2	Medium
	15	Strength Development	Up-hill and Downhill running		
	10	Supplementary training	Training Exercise Standing Broad Jump (3 times each.)		
	05	Relaxation	Easy Walking and Jogging		
Sunday			Rest		

**Collection of Data**

The necessary data would be collected by administrating the tests for measuring the selected variables.

Before collecting the data, the subjects would be given a chance to practice the prescribed tests so that they should become familiar with the tests and know exactly what is to be done.

**Statistical Analysis**

**Findings**

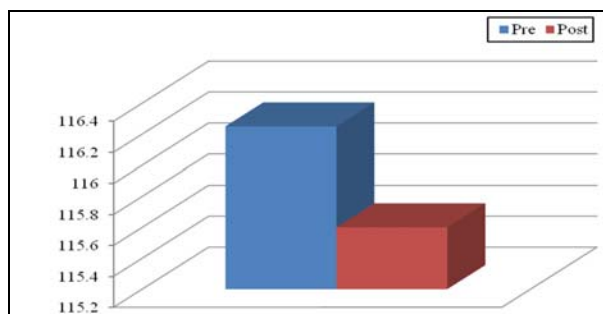
The data collected on 40-male subjects before and after six week morning conditioning program on blood pressure, Hemoglobin percentage, pulse rate and exhale capacity was analyzed by comparing the means of pre and post test of experimental group and was again statistically analyzed by applying 't'-test to check the significant difference among selected variables. Therefore separate tables and graphs have been presented for each variable as follows.

**Table 1:** Impact of morning conditioning programme on systolic blood pressure between pre and post test.

Variable	Group	Mean	SD	SE	MD	Ot	df	Tt
SBP	Pre	116.25	3.27	1.08	0.65	0.602	38	2.02
	Post	115.60	3.55					

\*Level of Significance = 0.05 Tabulated 't' 0.05 (38) = 2.02

Table-1 reveals that there is significant difference between means of pre and post test of experimental group, because mean of pre test is (116.25) is slightly more than mean of post test is (115.60), and there mean difference is (0.65). To check the significant difference between pre and post test of experimental group the data was again analyzed by applying 't' test. Before applying 't' test, standard deviation was calculated between pre-test where S.D. (3.27) and Post test where S.D. (3.55) and their combine standard error (1.08). There was insignificant difference between pre and post test of experimental group because value of calculated 't' (0.602) which is less than tabulated 't' (2.02) at 0.05 level of confidence.



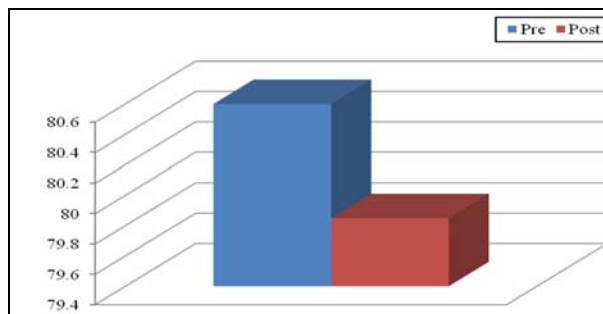
**Graph 1:** Graphical representation of mean difference between pre and post test for systolic blood pressure.

**Table 2:** Impact of morning conditioning programme on diastolic blood pressure between pre and post test.

Variable	Group	Mean	SD	SE	MD	Ot	df	Tt
DBP	Pre	80.60	1.05	0.26	0.75	2.904	38	2.02
	Post	79.85	0.49					

\*Level of Significance = 0.05 Tabulated 't' 0.05 (38) = 2.02

Table-2 reveals that there is significant difference between means of pre and post test of experimental group, because mean of pre test is (80.60) is slightly more than mean of post test is (79.85), and there mean difference is (0.75). To check the significant difference between pre and post test of experimental group the data was again analyzed by applying 't' test. Before applying 't' test, standard deviation was calculated between pre-test where S.D. (1.05) and Post test where S.D. (0.49) and their combine standard error (0.26). There was significant difference between pre and post test of experimental group because value of calculated 't' (2.904) which is more than tabulated 't' (2.02) at 0.05 level of confidence.



**Graph 2:** Graphical representation of mean difference between pre and post test for diastolic blood pressure.

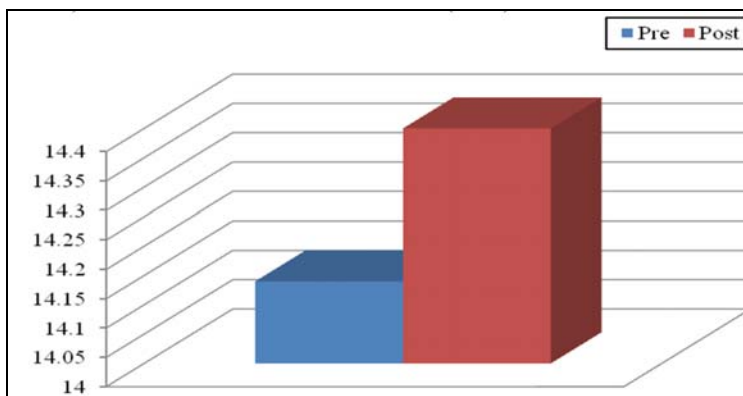
**Table 3:** Impact of morning conditioning programme on hemoglobin between pre and post test.

Variable	Group	Mean	SD	SE	MD	Ot	df	Tt
Hb	Pre	14.14	1.05	0.32	0.26	0.826	38	2.02
	Post	14.40	0.95					

\*Level of Significance = 0.05 Tabulated 't' 0.05 (38) = 2.02

Table-3 reveals that there is significant difference between means of pre and post test of experimental group, because mean of pre test is (14.14) is slightly less than mean of post test is (14.40), and there mean difference is (0.26). To check the significant difference between pre and post test of experimental group the data was again analyzed by applying 't' test. Before applying 't' test, standard deviation was

calculated between pre-test where S.D. (1.05) and Post test where S.D. (0.95) and their combine standard error (0.32). There was insignificant difference between pre and post test of experimental group because value of calculated 't' (0.826) which is less than tabulated 't' (2.02) at 0.05 level of confidence.



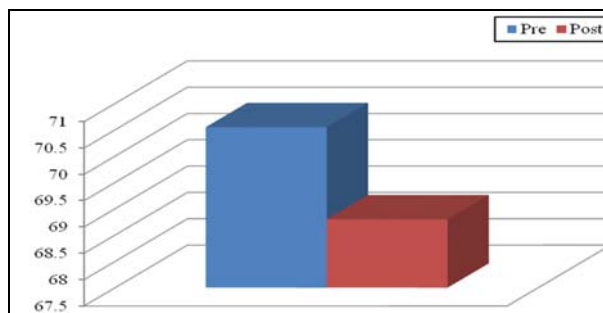
**Graph 3:** Graphical representation of mean difference between pre and post test for hemoglobin.

**Table 4:** Impact of morning conditioning programme on pulse rate between pre and post test.

Variable	Group	Mean	SD	SE	MD	Ot	df	Tt
PR	Pre	70.55	2.33	0.80	1.75	2.192	38	2.02
	Post	68.80	2.71					

\*Level of Significance = 0.05 Tabulated 't' 0.05 (38) = 2.02

Table-4 reveals that there is significant difference between means of pre and post test of experimental group, because mean of pre test is (70.55) is slightly more than mean of post test is (68.80), and there mean difference is (1.75). To check the significant difference between pre and post test of experimental group the data was again analyzed by applying 't' test. Before applying 't' test, standard deviation was calculated between pre-test where S.D. (2.33) and Post test where S.D. (2.71) and their combine standard error (0.80). There was significant difference between pre and post test of experimental group because value of calculated 't' (2.192) which is more than tabulated 't' (2.02) at 0.05 level of confidence.



**Graph 4:** Graphical representation of mean difference between pre and post test for pulse rate.

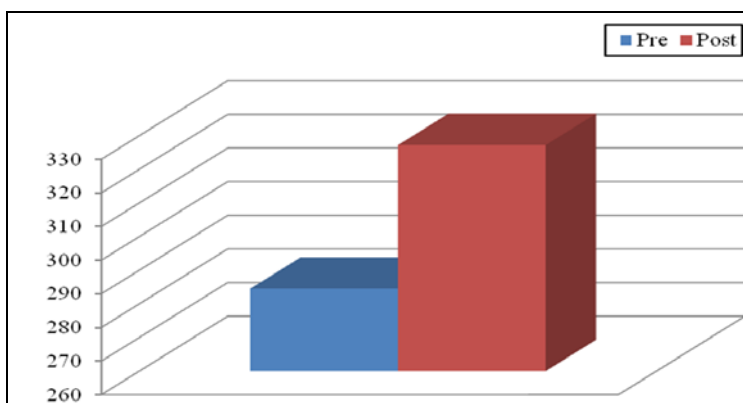
**Table 5:** Impact of morning conditioning programme on exhale capacity between pre and post test.

Variable	Group	Mean	SD	SE	MD	Ot	df	Tt
EC	Pre	284.50	35.62	10.80	42.70	3.947	38	2.02
	Post	327.20	32.74					

\*Level of Significance = 0.05 Tabulated 't' 0.05 (38) = 2.02

Table-5 reveals that there is significant difference between means of pre and post test of experimental group, because mean of pre test is (284.50) is slightly less than mean of post test is (327.20), and there mean difference is (42.70). To check the significant difference between pre and post test of experimental group the data was again analyzed by applying 't' test. Before applying 't' test, standard deviation was

calculated between pre-test where S.D. (35.62) and Post test where S.D. (32.74) and their combine standard error (10.80). There was significant difference between pre and post test of experimental group because value of calculated 't' (3.947) which is more than tabulated 't' (2.02) at 0.05 level of confidence.



**Graph 5:** Graphical representation of mean difference between pre and post test for exhale capacity.

### Discussion on findings

It has been observed from the analysis of data that there was significant difference between the same variables after the administration of morning conditioning programme except systolic blood pressure and hemoglobin.

The results showed that there was no significant improvement. It has been found that the systolic blood pressure remain similar as before and after morning conditioning programme. The diastolic blood pressure showed significant improvement as the planned morning conditioning program shows the significant effect. Hence morning conditioning program of six weeks was adequate for diastolic blood pressure.

The results showed that there was no significant improvement. It has been found that the hemoglobin percentage remain similar as before and after morning conditioning programme.

The pulse rate showed significant improvement as the planned morning conditioning program shows the significant effect. Hence morning conditioning program of six weeks was adequate for pulse rate.

The exhale capacity showed significant improvement as the planned morning conditioning program shows the significant effect. Hence morning conditioning program of six weeks was adequate for pulse rate.

### Conclusion

Within the limitations of the study and from statistical analysis the following conclusion was drawn.

1. There was no significant effect on the systolic blood pressure of subjects through the statistical analysis after six weeks morning conditioning programme.
2. There was significant effect on the diastolic blood pressure of subjects through the statistical analysis after six weeks morning conditioning programme.
3. There was no significant effect on the hemoglobin of subjects through the statistical analysis after six weeks morning conditioning programme.
4. There was significant effect on the pulse rate of subjects through the statistical analysis after six weeks morning conditioning programme.
5. There was significant effect on the exhale capacity of subjects through the statistical analysis after six weeks morning conditioning programme.

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