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A study on the effects of exercise on cardiac fitness level of sedentary peoples

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Abstract

Pulse rate is frequently used as a measure of a person's physical fitness. A low resting pulse rate is usually taken as an indication that the person is physically fit. A person's pulse rate increases with physical activity, and this increase is often monitored during exercise to ensure that he or she is working out at the correct level of exertion. The study was delimited to the pulse rate only. The subjects were divided into two equal groups, consisting of the 15 subjects each, i.e. experimental and control group. In order to determine the significant difference between experimental group and control group after administering the treatment, the pre and post test score are collected, the initial and final test score were analyzed using 't' ratio at 0.05 level of significance. On the basis of the findings six weeks fitness programme was found to be effective on Pulse rate on experimental group. Certain factor like life style, routine work, diet etc. may have affected the result of this investigation acted as limitation for the study.

Keywords: Pulse Rate, Target heart Rate and Recovery Heart Rate

Introduction

Pulse rate is frequently used as a measure of a person's physical fitness. A low resting pulse rate is usually taken as an indication that the person is physically fit. A person's pulse rate increases with physical activity, and this increase is often monitored during exercise to ensure that he or she is working out at the correct level of exertion. The study was delimited to sedentary individuals between the chronological age 35-45 years of both sexes of Delhi. The study was further delimited to the pulse rate only. Certain factor like life style, routine work, diet etc. may have affected the result of this investigation acted as limitation for the study. The aim and objective of the study was determining the effect of pulse rate on exercise.

Methodology

Subjects

The subjects were selected from Delhi local people. 15 subjects were randomly chosen from the 30, who were between the chronological age 35 to 45 years.

Procedure

Pulse rate were administered. Pulse rate was measured by qualified Doctor. The subject were performed physical fitness programme in following manner- on Monday they perform Endurance, Tuesday- Agility, Wednesday- flexibility, Thursday- Strength, Friday- Speed, Saturday- Endurance. The subject's everyday performed Warming up and limber down. The 15 subject (experimental group) assembled in the District Park of Vikaspuri at morning for 6 days per weeks of six weeks for 45-60 minutes.

Results

The subjects were divided into two equal groups, consisting of the 15 subjects each, i.e. experimental and control group were administered to Physical fitness programme for six weeks. Control group was not exposed to physical fitness programme. The data was collected on pulse rate for both the groups under similar conditions.

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In order to determine the significant difference between experiment group and control group after administering the treatment, the pre- and post- test score are collected, the

initial and final test score has been analyzed using “t” ratio at 0.05 level of significance.

Table 1: Significance Difference between Pre-and Post- test Means of Experimental and Control group in Pulse Rate

No. of Subjects	Variables	Means		S.D. Difference	Cal. Value	Tab. Value
		Per-test	Post-test			
15	Experimental Group	79.733	74.800	3.51460	5.436*	2.145
15	Control Group	72.600	72.800	.861	.899	

*Significant difference at 0.05 level of significance, $t_{.05}(14) = 2.145$

Table-1 reveal that there was significant difference in the initial means and the final means of the exercise after training programme as the obtained t-ratio (5.436) was greater than the tabulated “t” value (2.145) at 0.05 level of significance at 14 degrees of freedom. It is also evident for the same table that there was no significant difference in the obtained “t” value (.861) at 0.05 level of confidence of the 14 degree of freedom.

Discussion

On the basis of the findings those six weeks fitness programme was found to be effective on Pulse rate for the both control and experimental group. Table-1 showed that the physical fitness programme have positive effect on Pulse rate. As the programme consists of fitness programme which was for Pulse rate. Through fitness programme the subject improves cardiovascular system which helps to pump more blood from the heart per beat. The recovery rate becomes quicker. The number of capillaries increases and the heart becomes stronger and larger as a result of exercise so it can pump more blood through the body with every beat and sustains its maximum level with less strain. Due to this the pulse rate becomes lower.

Conclusion

1. The heart pumps more blood per beat.
2. The recovery rate becomes quicker.
3. The number of capillaries increases.
4. The resting pulse rate becomes lower.
5. The cardiovascular system becomes more efficient.

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