



EFFECT OF WEIGHT TRAINING ON RESTING PULSE RATE AMONG MIDDLE AGED OVERWEIGHT MEN

Dr Baiju P Jose¹, Dr Baljit Singh Sekhon², Dr P V Shelvam³

¹ Associate Professor in Physical Education, St. Cyril's College, Adoor, Kerala 691526

² Joint Secretary, Association of Indian University, New Delhi

³ Professor, Dept. of Physical Education, Annamalai University, India

Received 01st March 2021, Accepted 07th October 2021

Abstract

The purpose of the study was to find out the effect of weight training on resting pulse rate among middle aged overweight men students. To achieve the purpose of the study, 24 subjects were randomly assigned to experimental group (12) and control group (12). Physical examination and medical checkup at the initiation of the study yielded normal results in all the subjects. The experimental group underwent a Weight Training Program for a period of 24 weeks, whereas the control group maintained their regular routine activities. The subjects of both the groups were tested on selected criterion variable such as resting pulse rate 24 hours before and after the period of experimentation. The analysis of covariance (ANCOVA) was used to find out the significant differences if any, between the experimental group and control group on selected criterion variable. In all cases, 0.05 level of significance was fixed to test the significance, which was considered as an appropriate. The result of the present study has revealed that there was no significant difference among the experimental and control group on resting pulse rate.

Keywords: resting pulse rate, weight training, middle aged, overweight men

© Copy Right, IJRRAS, 2021. All Rights Reserved.

Introduction

Man lives for happiness. Happiness gives him enjoyment and satisfaction, which depends on his physical and mental ability. The primitive man may due to the very nature of his daily activities, builds a strong physique superior to the civilized man. In modern civilized machinery world, the chance for the physical activities is less because of the invention of computer and so many other devices and the basic need of participation in the physical activity to maintain a good health is almost forgotten. The Health is defined as a state of complete physical, mental and social well being and not merely free from diseases or infirmity. It is becoming increasingly clear that a person's health and well-being are improved by physical activity as well as by a nutritious diet.

Fit people make a fit nation. A nation's true wealth lies not in its land and water, not in its forests and mines, not in its flocks and herds, not in its currency but in its healthier men, women and children.

A healthier and fit person is an asset to humanity while an unfit individual is a curse.

Everybody desires a long and healthy life and exercise has a great part to play in this. In one aspect the body can be said to commence ageing from the moment it is born, although it is usual to say it really begins in about the mid-thirties. However different systems of the body age at different rates, no doubt depending upon how they are used or not used. Many people continue a very active life, both physically and mentally, well in to their old age. The barrier of these activities often seems to be physiological rather than physical, and when a person thinks he is too old to do something physically he may well be completely wrong, although too much of exercise could do harm. The only way to find out if one can do something is to try.

To be totally fit or functioning well would appear to be quite complicated affair. However, all one need to learn is, listen to the body and the mind, so that proper balance can be established by itself. Due to exercise, number of changes takes place. On the functional side, the endurance and strength increase allowing one to work harder and longer with less fatigue, the resting pulse rate will slow down, at the same time the heart volume increases. Muscle will thicken depending on how hard it is being used, and excess weight will be shed. Active

Correspondence

Dr P V Shelvam

Professor, Dept. of Physical Education, Annamalai University, India

people tend to suffer less from coronary problems than inactive ones, and if affected cope better.

Physical Training implies participation in a program of regular and vigorous physical activity with the primary intention of improving either physical performance or health through the development of some component of fitness such as cardio-vascular function or muscle strength. Physical activity is defined as "bodily movement produced by skeletal muscles that requires energy expenditure" and produces healthy benefits. Exercise, a type of physical activity, is defined as a planned, structured, and repetitive bodily movement done to improve or maintain one or more components of physical fitness. Physical inactivity denotes a level of activity less than that needed to maintain good health.

The quantitative relationship between level of activity or fitness and magnitude of cardiovascular benefit may extend across the full range of activity. A moderate level of physical activity confers health benefits. However, physical activity must be performed regularly to maintain these effects. Moderate-intensity activity performed by previously sedentary individuals results in significant improvement in many health-related outcomes. These moderate-intensity activities are more likely to be continued than are high-intensity activities. It is recommended that all children and adults should set a long-term goal to accumulate at least 30 minutes or more of moderate-intensity physical activity on most, or preferably all days of the week. Intermittent or shorter bouts of activity (at least 10 minutes), including occupational, non occupational, or tasks of daily living, also have similar cardiovascular and health benefits if performed at a level of moderate intensity (such as brisk walking, cycling, swimming, home repair, and yard work) with an accumulated duration of at least 30 minutes per day. People who currently meet the recommended minimal standards may derive additional health and fitness benefits from becoming more physically active or including more vigorous activity. Strength training is important for cardiac health because heart disease risk is lower when the body is leaner. Studies have found that cardiac patients gained not only strength and flexibility but also aerobic capacity when they did strength training three times a week as part of their rehabilitation program. All these studies have prompted the American Heart Association to recommend strength training as a way to reduce risk of heart disease and as a therapy for patients in cardiac rehabilitation programs.

Resistance training is also known as strength training or weight training. Strength is the ability to overcome resistance or to act against resistance. Strength should not be considered as a product of only muscular contractions. Strength is a conditional ability that depends mostly upon the energy liberalization process in the muscles.

METHODOLOGY

A total number of 41 potentially overweight men volunteered for the study. In the first phase all of them were informed in detail the nature of the study and what their contribution will be. Out of which 9 subjects opted out. In the second phase the height, weight and pulse rate of all the 32 subjects in fasting state without shoes and with minimum clothing were measured. All the measurements were performed in the erect position by the researcher. The Body Mass Index (BMI) was computed as the weight (Kgs) divided by height square (m²). Out of the 32 subjects 29, who were having BMI above 27 were selected for the third phase. In the third phase a written explanation of the experimental procedure and potential risk factors were given to each subjects. Five of them opted out of the study due to personal reasons. All the other 24 volunteered as subjects for the study and their informed consent was obtained.

The 24 subjects were randomly assigned to either Experimental group ('EXP', No: 12) or Control group ('CON', No: 12). Physical Examination and Medical checkup at the initiation of the study yielded normal results in all the subjects and none of the subjects received any period of the study. The baseline characteristics of the medication during the subjects were given in Table-I

	Experimental Group		Control Group		Total	
	Mean	SD	Mean	SD	Mean	SD
Age	39.17	2.29	41.75	2.45	40.45	2.67
Height	168.42	6.14	166.92	5.70	167.67	5.84
Weight	88.00	9.02	87.83	7.80	86.10	8.79
BMI	30.96	2.07	31.52	1.89	31.24	1.96

The selected subjects were randomly divided into three groups of 12 subjects each group. Group one acted as experimental group, and group II acted as control group. The experimental group subjects were underwent regular weight training practice for twenty four weeks. The subjects were tested on selected criterion variable such as resting pulse rate prior to and immediately after the training period. Analysis of covariance (ANCOVA) was applied for analyze the data. The 0.05 level was used to test this significance.

PULSE COUNTING

The pulse test is usually taken at the radial or carotid artery. In both cases two or three fingers should be used to feel the pulse, rather than one's thumb. Due to the possible confusion arising from feeling one's own pulse rate transmitted through the thumb. The carotid artery is located immediately below the angle of the jaw. The radial pulse is found in the hollow on the thumb side of the wrist about an inch from the base of the thumb. It is important the counter should not press too hard on the carotid artery so that a reaction to pressure does not produce any alteration in the beat. In counting pulse it is recommended that the beat felt at the same time as the signal to start counting is given should be designated as 'zero'.

Analysis of Covariance for Resting Pulse Rate among Experimental & Control Groups

		Control Group	Exp. Group	F ratio
Pre	Mean	72.58	73.08	0.789
	SD	0.99	1.68	
Post	Mean	72.00	72.92	2.58
	SD	1.04	1.68	
Adj Post	Mean	72.89	72.77	0.075

Table II shows that the Pre Test means of resting pulse rate among Experimental group (73.08 ± 1.68) and Control group (72.58 ± 0.99) resulted in F - ratio of 0.789 which indicates no significant difference between Pre Test means at .05 level of confidence. The Post Test means of resting pulse rate among Experimental group (72.92 ± 1.68) and Control group (72.00 ± 1.04) resulted in a F - ratio of 2.58 which is not significant at .05 level of confidence, and the adjusted post is means of Experimental (72.77) and Control groups (72.89) resulted in a F - ratio of 0.075 which was also not significant at .05 level of confidence. This indicates that there is no significant change in resting pulse rate among experimental group when compared with the control group. After going through the results, it was concluded that Weight Training Program has not significantly changed resting pulse rate among over weight middle aged men.

DISCUSSION ON FINDINGS

The Pre Test means and Post Test means of Resting pulse rate among Control group (72.58 ± 0.99 vs 72.00 ± 1.04) shows an increase of 0.75 (1.9%) , While the Pre Test

RESULTS FINDINGS

The mean and standard deviation scores of pretest, posttest and changed posttest of resting pulse rate on weight preparing and control bunch are given in table. 'F' ratio test processed concerning the resting pulse rate on weight preparing and control bunch in the pretest, posttest and changed post test are additionally introduced in table II.

The information gathered before and after the experimentation time frame on resting pulse rate among test and control bunches were measurably broke down and introduced in table II.

means and Post Test means of Resting pulse rate among Experimental group (73.08 ± 1.68 vs 72.92 ± 1.68) shows no change . Furtherer more when the adjusted post test means of Experimental (72.77) and Control groups(72.89) were analyzed by means of Analysis of Covariance , The obtained results indicates no significant change in of Resting pulse rate in the Experimental Group when compared with the Control Group ($P < 0.05$).

On the basis of the results obtained it was concluded that Weight Training Program has not resulted in any significant change in of Resting Pulse Rate among Overweight middle aged men. The obtained results were in conformation with the findings of Blumenthal, J. A., et al (1991), Cononie, C. C., et al.(1991), Harris, K. A., and R. G. Holly (1987). Lightfoot, J. T et al.(1994), Norris, R., D.et al.(1990), and Stone, M. H, et al (1983).

DISCUSSION ON HYPOTHESIS

On the basis of the results obtained it was concluded that Weight Training Program has not resulted in any significant change in of Resting pulse rate among Overweight middle aged men. In hypothesis it was stated that there will be a significant reduction in Resting pulse

rate. The results of the study do not show any such reduction and hence the hypothesis is rejected.

REFERENCES

- Blumenthal, J. A., W. C. Siegal, and M. Applebaum., Failure of exercise to reduce blood pressure in patients with mild hypertension: results of a randomized controlled trial, *J. Am. Med. Assoc.*, 266: PP-2098-2104, 1991
- Cononie, C. C., Graves, J. E., Pollock, ML, L., Phillips, M. I., Sumners, C. and. Hagberg, J., M. Effect of exercise training on blood pressure in 70- to 79-yr-old men and women, *Med. Sci. Sports Exercise*. 23: 505-511, 1991.
- Harris, KA, and Holly RG., Physiological response to circuit weight training in borderline hypertensive subjects, *Med Sci Sports Exerc*. 19, 1987.
- Lightfoot, J. T., Torok, D. J., Joumell, T. W., Turner, M. J. and Claytor, R. P., Resistance training increases lower body negative pressure tolerance. *Med. Sci. Sports Exercise*, 26, 1994
- Norris, R., D. Carroll, and R. Cochrane. The effects of aerobic and anaerobic training on fitness, blood pressure, and psychological stress and wellbeing. *J. Psychosom. Res.* 34: 367-375, 1990.
- Stone, MH, Wilson GD, Blessing D, and Rozenek R. Cardiovascular responses to short-term Olympic style weight-training in young men, *Can J Appl Sport Sci*. 8: 134-139, 1983.

Please cite this article as: **Dr Baiju P Jose, Dr Baljit Singh Sekhon and Dr P V Shelvam** (2021). **EFFECT OF WEIGHT TRAINING ON RESTING PULSE RATE AMONG MIDDLE AGED OVERWEIGHT MEN.** *International Journal of Recent Research and Applied Studies*, 8, 10(2), 5-8