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Weight training as a determinant of resting pulse rate of over weight men

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Abstract
This study was conducted to get a clear picture of the changes in pulse rate of over weight men when they are exposed to scientific and systematic weight training. For the purpose of the study 24 over weight men were selected. They were divided into experimental and control groups of 12 each. The experimental group underwent training programme in weight training and the control group did not involve in any training session. A pre test was conducted for both groups by measuring their resting pulse rate. After 24 weeks of weight training for the experimental group, a post test was conducted for both the groups. The data were analysed using ANACOVA. The results of the study reveals that the experimental group showed significantly lower resting heart rate.

Keywords: Weight training, resting heart rate

Introduction
Exercise is not a single entity; there are many kinds of exercises which vary in intensity, frequency and duration and having variable effects on body systems. Exercise may favorably modify the natural history of a number of chronic diseases.
.The principle behind weight training is to add resistance to the body's natural movements so muscles get stronger. Weight training machines often are tailored to a man's frame, they can better isolate the muscle which are working and don't need as much balance and coordination as free weights. Weight training will give strength and endurance to perform daily tasks more efficiently and safely during work, errands and recreation. It can also improve the body's muscle-to-fat ratio, helping one to bum calories more efficiently and lose weight; it confers increased physical abilities and improves the quality of life (Bassey, 1985) [1]. There are numerous benefits to strength training regularly, particularly as one grow older. It can be very powerful in reducing the signs and symptoms of numerous diseases and chronic conditions, among them: arthritis, diabetes, osteoporosis, obesity, back pain, depression and etc. To take full advantage of the many benefits of strength training, it's important to progress or consistently advance the intensity of the workout by challenging the muscles with heavier weights. This continuous challenge allows the muscles to grow strong and stay strong. Progressing will boost the feelings of independence and will help ensure that one live well into old age without the fear of falling. It will also gives a tremendous sense of pride and accomplishment. Maintaining pulse rate in normal level helps people to lead a healthy life. This study will give a clear picture of how weight training effects the resting pulse rate.

Objective of the Study
The objective of this study is to find out the effect of weight training on the resting.

Delimitations
The study was delimited in terms of sample and contents as follows:
1. The study is restricted to 24 middle aged overweight men holding different administrative office at Pala Town of Kotayam District in Kerala.
2. The age of the subjects range between 32 and 49. All of them were healthy and normal. Pulse rate of over weight men.

Limitations

1. The heterogeneous characters of the subjects in hereditary and environmental factors were recognized as limitation.
2. The disparity prevailing in the internal and external factors which could have discouraged or motivated the subjects during training as well as testing periods could not be controlled.

Hypothesis

It is hypothesized that the resting pulse rate of experimental group will be significantly reduced due to weight training.

Methodology

Selection of Subjects

For the purpose of the study, 24 middle aged overweight men from Pala town of Kottayam district in Kerala.

Design of the Study

Selected 24 over weight men were divided into experimental and control groups. After taking the pre test, the experimental group underwent a training programme of weight training for a period of 24 weeks and the control group did not involve in any type of training. Post test was conducted for the selected variable after 24 weeks of training.

Results and Discussion

The data collected prior to and after the experimentation period on resting pulse rate among experimental and control groups were statistically analyzed and presented in table.

Table 1: Analysis of covariance for resting pulse rate among experimental & control groups

		Control Group	Exp. Group	sov	Sum of Squares	df	M.S	F-Ratio
Pre test	Mean	72.58	73.08	B	1.50	1	1.50	0.789
	SD	0.99	1.68	W	41.83	22	1.902	
Post test	Mean	72.00	72.92	B	5.042	1	5.042	2.58
	SD	1.04	1.68	W	42.92	22	1.95	
Adjusted post test mean		72.89	72.77	B	0.079	1	0.079	0.075
				W	22.12	21	1.054	

The Table value for 0.05 level of confidence with degree of freedom for 1&22 and 1&21 are 4.30 and 4.32 respectively

Table 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 (Fig. 9). 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.

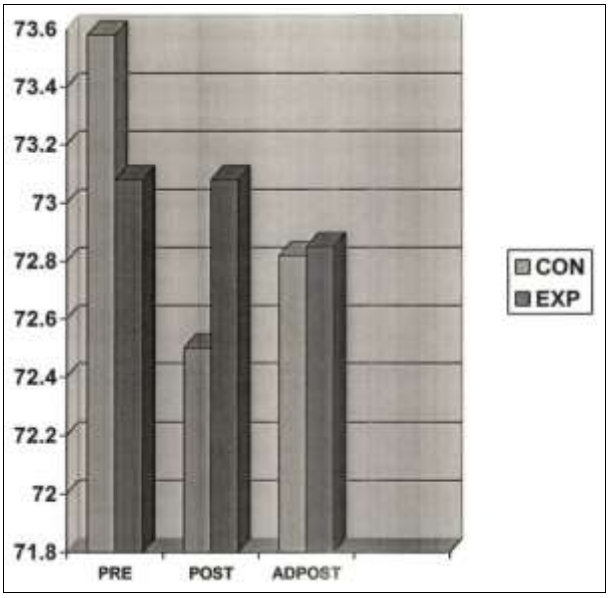

Fig 1: Bar Diagram showing the pre test, post test and adjusted post test means of resting pulse rate among experimental and control groups

Conclusion

On the basis of the results obtained it was concluded that weight training program has not resulted in any significant change in 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) [2], Harris, K. A., and R. G. Holly (1987) [3]. Lightfoot, J. T *et al*. (1994) [4], Norris, R., D. *et al*. (1990) [4], and Stone, M. H, *et al*. (1983) [5].

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