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Effect of Circuit Based Interval Training on Selected Cardio Respiratory Endurance Variable among College Men Athletes

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Abstract

The purpose of this present study was to investigate the effect of circuit based interval training on selected cardio respiratory endurance variable among college men Athletes. Thirty college men Athletes between 18 to 25 years of age from Srm University, Chennai, Tamil Nadu were randomly selected as subject for the study. The selected dependent variables for physical variable namely cardio respiratory endurance will be taken as criterion variables in this study. All the subject were tested prior to and immediately after the experimental period on the selected dependent variables. Statistical technique't' ratio was used to analyze the means of the pre-test and post test data of experimental group. Significance difference found at 0.05 level of significance.

Keywords: Interval training, Cardio respiratory endurance, Athletes.

Introduction

Interval training is perhaps the most method for improving endurance of Various types. In interval method the activity is done at relatively higher Intensity with intermittent intervals of in complete recovery. in this method the activity is done with sufficient speed, distance and duration to increase the heart rate up to 180 beats/min. after this there should be a recovery period and when the heart rate comes down to 120-130 beats/min this work should be started again .Interval training is a method of training where you increase and decrease The intensity of your workout between aerobic anaerobic training. Interval Training in Sweden , where some say it originated , is known as fatlike Training Swedish for "speed play".

The protocol for interval training is to Push your body past the aerobic threshold for a few moments and then return to your aerobic conditioning level with the objective of improving your performance speed, strength, endurance. The aerobic threshold is the intensity where your body switches from burning a greater percentage of fat to a greater percentage of carbohydrate and is generally 85% of your maximum heart rate train below 85% and its aerobic ; train above 85% units anaerobic . Interval training is basically exercise which consists of activity at high Intensity for a period of time , followed by low intensity exercise for a period of time these 'sets' are repeated.

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Methodology

Selection of subjects

To achieve the purpose of this present study 30 college Men Athletes are selected from SRM University, Chennai, Tamil Nadu state, India. College men athletes are selected randomly as subject and their age group between 18 to 23 years.

Experimental design

The selected subjects (N=30) were divided into two groups equally and randomly. Of which Experimental Group I underwent Circuit based interval training (CBIT) and Group II acted as Control Group (CG). The experimental group was treated with their respective training for one hour per day for three days a week for a period of six weeks. The Test criteria were measured before and after training period. The pre and post test were taken for analysis.

Selection of Variables

Independent variables

Experimental Group I	Circuit based interval training	15	Total subjects -30
Control Group	No Training	15	

Dependent variables

- Cardio respiratory endurance

Selected Variables and Test Items

S.NO	VARIABLES	TEST ITEMS	UNIT
1	Cardio respiratory endurance	Cooper 12 min run/walk	METERS

Statistical Technique

The following statistical procedures were used. The "t" ratio was calculated to find out the significance of the difference between the mean of the initial and final test of the experimental group.

Analysis of the Data

The significance of the difference among the means of experimental group was found out by pre-test. The data were analyzed and dependent't' test was used with 0.05 levels as confidence.

Table 1

Analysis of't'-ratio for the pre and post tests of experimental and control group on cardio respiratory endurance for college men athletes (Cooper 12min run/walk counts means in meters)

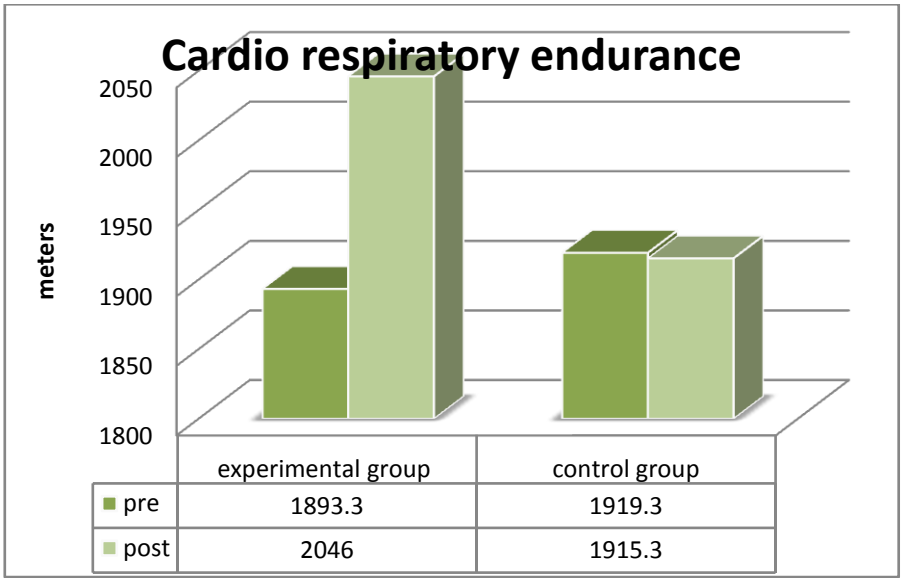
Groups	Mean		Mean Difference	S.D	Standard Error	't' ratio
	Pre	Post				
Experimental	1893.3	2046	152.7	138.8497	35.8497	4.26*
Control	1919..3	1915.3	4	40.32015	40.32015	0.38

Significance at .05 level of confidence. (The table value required for 0.05 level of significant with df of 14 is 2.14)

The Table 1 shows that the mean values of pre-test and post-test of control group on cardio respiratory endurance were 1919.3 and 1915.3 respectively. The obtained 't' ratio was 0.38, since the obtained 't' ratio was less than the required table value of 2.14 for the significant at 0.05 level with 14 degrees of freedom it was found to be statistically insignificant. The mean values of pre-test and post-test of experimental group on cardio respiratory endurance were 1893.3 and 2046 respectively. The obtained 't' ratio was 4.26* since the obtained 't' ratio was greater than the required table value of 2.14 for significance at 0.05 level with 14 degrees of freedom it was found to be statistically significant. The result of the study showed that there was a significant difference between control group and experimental group in cardio respiratory endurance. It may be concluded from the result of the study that experimental group improved in cardio respiratory endurance (urban school boys) due to six weeks of Aqua Aerobic exercises.

Figure I

Mean values of circuit based interval training group and control Group on cardio respiratory endurance for college men Athletes (means in meters)



Discussion on Findings

The investigator had a through and vision that circuit based interval training would improve cardio respiratory endurance which in turn would help them to perform better in their endurance activities. The investigator selected exercises that are circuit based interval training for Athletes. It is a matter of interest how far interval training improves the college men Athletes.

Conclusion

1. There was a significant difference between experimental and control group on cardio respiratory endurance variables after the exercise period.
2. There was a significant improvement in cardio respiratory endurance. However the improvement was in favour for experimental group compare better than the control group due to six weeks of circuit based interval training.

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