



## Effect of Continuous Running on Selected Cardio Respiratory Endurance of College Men Students

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### Abstract

*The purpose of the study was to find out the effect of continuous running on cardio respiratory endurance of college men students. To achieve this purpose of the study, thirty men students in the department of physical education and sports and sciences, Annamalai University were selected as subjects at random. Their age ranged between the 18 to 25years. The selected subjects were divided in two equal groups fifteen each namely continuous running group and control group. Group I underwent for five continuous running days per week for twelve weeks, whereas Group II acted as the control group who maintained their daily routine activities and no special training was given to them. The following variable namely cardio respiratory endurance was selected as criterion variable. The subjects of the groups was tested on cardio respiratory endurance by using cooper's 12 minutes run/walk test at prior and immediately after the training period. The collected data were analyzed statistically through analysis of covariance (ANCOVA) to find out the significant differences, if any between the groups. The .05 level of confidence was fixed to test the level of significance, which was considered as an appropriate. The results of study showed that there was a significant difference exist between continuous running group and control group on cardio respiratory endurance. And also there was a significant improvement on cardio respiratory endurance due to continuous running.*

**Keywords:** Continuous running cardio respiratory endurance college men students.

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### Introduction

Continuous training is when low- to mid-intensity exercises are performed for more than 20 minutes without resting intervals. Generally, this type of training is used to prepare the body for sustained workouts such as marathons and triathlons, but can also be effective for more casual athletes. It allows the body to work from its aerobic energy stores to improve overall fitness and endurance. Chief benefits of continuous training include fat burning, muscle building, and increasing maximum aerobic potential. Almost any type of exercise can be done in a continuous way. Jogging, cycling, and swimming are often the most common, but the style of exercise is nowhere near as important as the manner in which it is accomplished. The most important part of this type of training is the amount of time spent performing the exercise.

The main goal behind continuity training is to condition the heart for long periods of exertion. Athletes typically start at about 60% of their full capacity, which means that they are working, but not burning themselves out. A light jog or an easy bike ride that lasts an hour or more are good examples of what this might look like.

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Although professional athletes often use continuity techniques to improve their endurance training, but it is by no means limited to those with superior athletic ability. One of the biggest benefits of a continuous exercise plan is the slow but steady improvement most athletes see over time. Someone who may only be able to jog for eight minutes at the start may find, after enough weeks or months have passed, that 12 minutes is achievable. Before long, 20 or even 30 minutes may become normal. Usually at least three or four workouts per week are required to see improvement.

Continuous training can also help establish what is called a "fitness base," a foundation of exercise that athletes can depend on for further training. A person who knows he or she can comfortably jog for 45 minutes will be able to use that amount of time as a window for speed intervals or more intensive workouts later on. When the body is conditioned to keep moving for certain durations, it can adapt to filling those periods with different, more strenuous activities.

### Methods

The purpose of the study was to find out the effect of continuous running on cardio respiratory endurance of college men students. To achieve this purpose of the study, thirty men students in the department of physical education and sports and sciences, Annamalai University were selected as subjects

at random. Their age ranged between the 18 to 25years. The selected subjects were divided in two equal groups fifteen each namely continuous running group and control group. Group I underwent for five continuous running days per week for twelve weeks, whereas Group II acted as the control group who maintained their daily routine activities and no special training was given to them. The following variable namely cardio respiratory endurance was selected as criterion variable. The subjects of the groups was tested on cardio respiratory endurance by using cooper's 12 minutes run/walk test at prior and immediately after the training period. The

collected data were analyzed statistically through analysis of covariance (ANCOVA) to find out the significant differences, if any between the groups. The .05 level of confidence was fixed to test the level of significance, which was considered as an appropriate

#### Cardio respiratory endurance

The analysis of covariance on cardio respiratory endurance of the pre and post test scores of continuous running group and control group have been analyzed and presented in Table I.

**Table I.** Analysis of covariance on cardio respiratory endurance for continuous running groups and control groups

Test / Group		continuous running Groups	Control Group	Source of variance	Sum of Square	df	Mean Square	obtained 'F' Ratio
Pre Test	Mean	1378.33	1606.33	Between	3220.9	1	3220.9	1.55
	S.D	29.38	25.14	Within	578689999	28	20667499.96	
Post test	Mean	1400	1408	Between	105729146	1	105729146	43.29*
	S.D	28.98	28.87	Within	68378202	28	2442078.64	
Adjusted Post test	Mean 6.95 7.26	1595.83	1418.49	Between	34189092.53	1	34189092.53	235.74*
				Within	3915894.83	27	145033.14	

\* Significant at .05 level of confidence.( The table values required for significance at .05 level of confidence for 1 and 28 and 1 and 27 are 4.20 and 4.21 respectively ) .

The table I showed that the pre test mean values on continuous running group and control group were 1378.33 and 1606.33 respectively. And the obtained 'F' ratio of 1.55for pre test which was less than the required table value 4.20 with df 1 and 28 at 0.05 level of confidence on cardio respiratory endurance. The post test mean values on cardio respiratory endurance for continuous running group and control group were 1400 and 1408 respectively .And the obtained 'F' ratio of 43.29 for post test which was greater than the required table value 4.20 with df 1 and 28 at .05 level of confidence on cardio respiratory endurance. The adjusted post test mean values on cardio respiratory endurance for continuous running group and control group were 1595.83and 1418.49 respectively . The obtained 'F' ratio of 235.74 for adjusted post test which was grater than the required table value 4.21 with df 1 and 27 for significance at .05 level of confidence on cardio respiratory endurance. Hence, the results of the study showed that there was a significance difference exist between group and control group on cardio respiratory endurance.

#### Conclusions

1. The cardio respiratory endurance resulted in the following changes in the continuous running when compared with the control group.
2. The results of study showed that there was a significant difference exist between continuous running group and control group on cardio respiratory endurance. And also there was a significant improvement on cardio respiratory endurance due to continuous running.

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