



## EFFECT OF INTERVAL TRAINING ON SPEED OF COLLEGE MEN

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### Abstract

*The purpose of the study was to investigate the effect of interval training on speed of college men. Thirty college men selected as subjects from the Department of Agriculture, Annamalai University, Tamil Nadu, were divided into two groups, namely, interval training (n=15), and control (n=15) groups. The age, height and weight of the subjects ranged from 18 to 21 years, 160 to 171 centimetres and 56 to 69 kg respectively. Prior to and after the training the subjects were tested on speed. Analysis of covariance was used to determine the significantly difference existing between pre test and post test on speed. The result of the study proved that due to the effect of interval training the speed significantly improved for college men.*

**Keywords:** Interval training and Speed.

### Introduction

Interval training can be described as short periods of work followed by rest. The main aim is to improve speed and cardiovascular fitness. Interval training is a good anaerobic exercise. It can be done with many kinds of exercise like running, biking, and swimming. An interval is completed by raising speed for a small period of time. Anaerobic interval training is mainly for the persons who are very fit and wish to increase speed, lactate threshold limit, and overall aerobic strength. Such training typically results in greater lactic acid concentrations in using muscles and is go with by greater muscular pain. This can be an extremely strong type of training and should not be trying by a beginning exerciser. Those who do use this practice should do a significant low-level aerobic warm up and enlarge before and after energetic activity.

Interval training is a type of discontinuous physical training that involves a series of low- to high-intensity exercise workouts interspersed with rest or relief periods (Heyward, 2006). Some experts believe aerobic interval training may benefit exercisers by allowing them to burn more calories in a shorter period of time, and by improving aerobic capability at a faster rate, when compared with continuous-intensity exercise. In addition, some exercisers find interval training less monotonous than continuous-intensity exercise.

Interval training adheres to the principle of adaptation. Interval training leads to many physiological changes including an increase in cardiovascular efficiency as well as increased tolerance to the build-up of lactic acid. These changes result in improved performance, greater speed, and endurance. Interval training also helps avoid injuries associated with repetitive overuse, common in endurance athletes. Intervals also allow an athlete to increase training intensity without overtraining or burn-out. Adding

intervals to a workout routine is also a great way add cross training to an exercise routine.

Sprinting is the act of running over a short distance at (or near) top speed. It is used in many sports that incorporate running, typically as a way of quickly reaching a target or goal, or avoiding or catching an opponent. Human physiology dictates that a runner's near-top speed cannot be maintained for more than 30–35 seconds due to the accumulation of lactic acid in muscles (IAAF, 2010).

### Methodology

The purpose of the study was to investigate the effect of interval training on speed of college men. Thirty college men selected as subjects from the Department of Agriculture, Annamalai University, Tamil Nadu, were divided into two groups, namely, interval training (n=15), and control (n=15) groups. The age, height and weight of the subjects ranged from 18 to 21 years, 160 to 171 centimetres and 56 to 69 kg respectively. The speed was measured by 50 m run test.

### Training Protocol

The group -I underwent interval training programme for three days a week for eight weeks. The intensity of training during the first week of training was fixed at 45% of HRR. The training load was progressively increased once in two weeks for 5%. The distance of the interval training (short sprint) fixed 30 meters. Group – II acted as control.

### Statistical Analysis

The data collected from the two groups prior to and post experimentation were statistically analyzed to find out the significant difference if any, by applying the analysis of covariance (ANCOVA). In all the cases statistical significance was fixed at .05 levels.

**Results**

The adjusted post test means on speed of interval training and control groups are 7.21 and 7.74 respectively. The obtained ‘F’ ratio value of 28.15 on speed were greater than the required table value of 4.21 for the degrees of freedom 1 and 27 at 0.05 level of confidence. It is observed that significant differences

exist among the adjusted post test means of interval training and control groups on speed. The result of the study showed that speed is increased for the interval training group’s subjects when compared to the control group subjects.

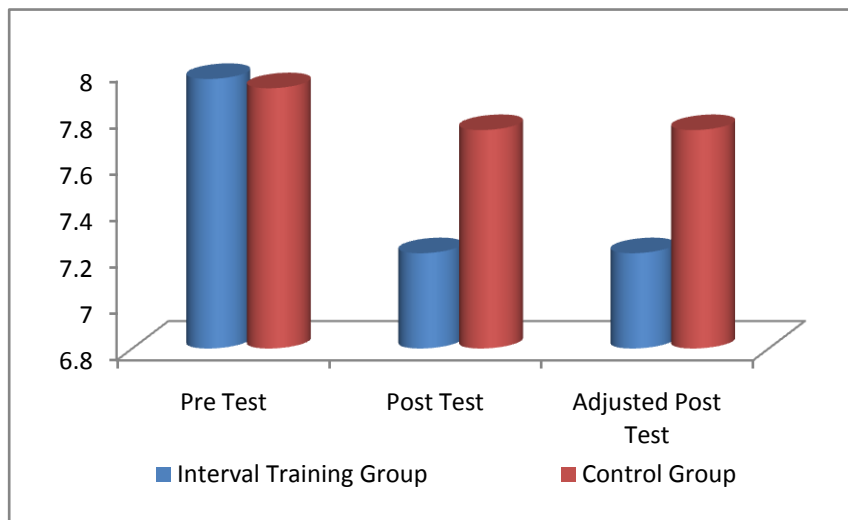
**Table I. :** Analysis of Covariance on Speed of Interval Training and Control Groups

	Interval Training	Control Group	S o v	Sum Squares	of df	Mean squares	‘F’ ratio
Pre test Mean SD	7.96	7.92	B	0.016	1	0.016	0.13
	0.36	0.32	W	3.35	28	0.12	
Post test Mean SD	7.21	7.74	B	2.13	1	2.13	29.17*
	0.15	0.34	W	2.05	28	0.073	
Adjusted Post test Mean	7.21	7.74	B	2.14	1	2.14	28.15*
			W	2.04	27	0.076	

\*Significant at .05 level of confidence

(The required table value for significance at 0.05 level of confidence with degrees of freedom 1 and 28 is 4.20 and degree of freedom 1 and 27 is 4.21)

**Figure-I.** Cylinder Diagram Showing the Mean value on Speed of Experimental and Control Groups



**Discussion**

The result of the study showed that eight weeks of interval training influence to increase the speed of the experimental group when compare to the control group. The following studies are supporting with my study results. Dupont, et al., (2004) examined the effects of in-season, high-intensity interval training on professional male soccer players' running performances were investigated. Twenty-two subjects participated in 2 consecutive training periods of 10 weeks. Results from the high-intensity interval training have shown that maximal aerobic speed was improved. Czuba, et al., (2013) investigated the effects of high intensity interval

training in normobaric hypoxia on aerobic capacity in basketball players. The statistical post-hoc analysis result showed that the training in hypoxia caused a significant increase (10%) in total distance during the ramp test protocol the speed was also increased.

**Conclusion**

The result of the study showed that eight weeks of interval training influence to increase the speed of the experimental group.

### References

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