



## IMPACT OF HYPOXIC TRAINING ON RESTING PULSE RATE AMONG COLLEGE MEN PLAYERS

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### ABSTRACT

The purpose of the study was to find out the influence of twelve weeks of Hypoxic Training programme on Resting pulse rate among college men. For this purpose forty (N=40) college men studying Anna University Chennai, were selected as subjects. The subjects were divided into two groups Hypoxic Training Group (20) and control Group (20). Experimental group performed Hypoxic Training, three days a week for a period of Twelve weeks. Resting Pulse rate was selected as dependent variable and it was assessed through Manuel method. One way ANCOVA was used to find out the adjusted mean significant difference, between the groups. The results, concludes Resting Pulse Rate was significantly improved. When compared to the control group due to the efficiency of Hypoxic Training.

**KEYWORDS:** Hypoxic Training, Resting Pulse Rate, Men Players.

### INTRODUCTION

Hypoxic (low-oxygen) workout makes the oxygen delivery system more efficient, increasing the strength and endurance up to 40 percent (Guyton, 1990). Hypoxic capacity has covered such matters as the exchange of gases in the lungs during breath holding. The Physiological effect of Hopxia on the human body has been extensively studied through out the world for the last decades. Hypoxic Training have highly beneficial in a verify of ways, strengthening the bodies cardio pulmonary system, increase strength and endurance, boosting immunity and even extending one's life span(Dick,1980). Goyton (1985) studied Russian athletes showed better improvements in performance of up to 40 percent have been observe from Hypoxic method. Lisstitsyn (1997) observed hypoxic Training have positive effect on decreasing asthma and anaemia, Levine and Stray Gvide, Walance observed INH (Intermittent Hypoxic Training) stimulate the immune system, improves non specific resistance reduces cholesterol levels in the blood, normalizes protein lipid carbohydrate metabolism, electrolyte and ferment composition of the blood.

### METHODOLOGY

The purpose of the study was to find out the influence of twelve weeks hypoxic training programme on Resting Pulse Rate among college men. A sample of

40 college men pertaining to two groups Hypoxic Training (20) and Control Group (20) studying Bachelor of Engineering, Anna University, Chennai Tamilnadu were selected randomly. Their age ranged between 18 to 21 years. Physiological parameter Resting Pulse Rate, was measured by Manuel method. Subjects were performed Hypoxic training for three days a week for a period of twelve weeks, during the training course of 1500 metres Running experimental group had a inhalation of breath for six steps, breath holding for six steps and breath expiration for six steps throughout the course of Training period.

### EXPERIMENTAL DESIGN AND STATISTICAL TECHNIQUE

Random group experimental design was used; experimental group and control group data were carefully recorded for pretest and post test scores. Analysis of Co-variance (ANCOVA) was used to find out the adjusted mean significant difference among the treatment groups. Since two groups involved the adjusted posttest mean comparison were analyzed the significant.

### RESULT AND DISCUSSION

The data collected by adopting above procedure were statically analyzed. The results are presented in the following table.

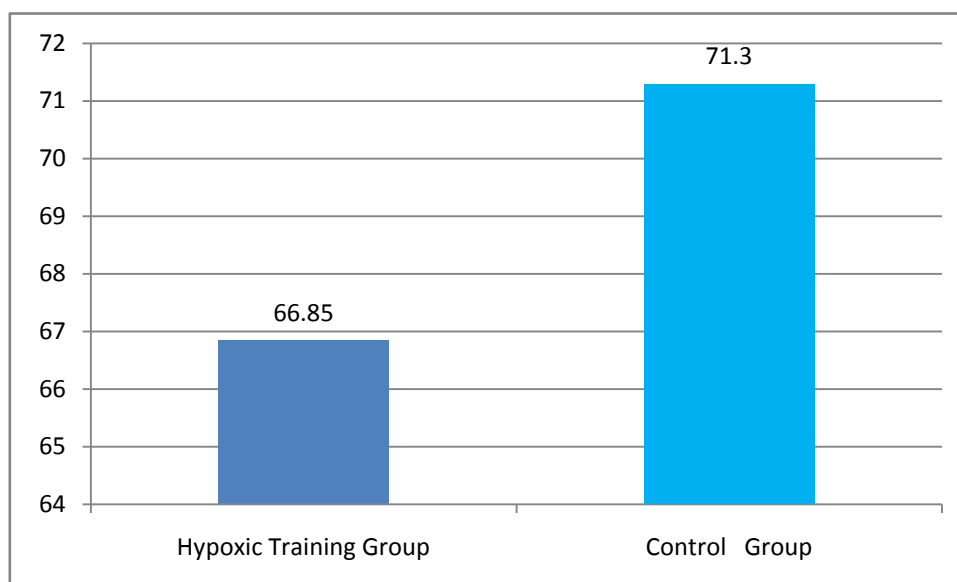
**TABLE – I**  
**ANALYSIS OF COVARIANCE OF RESTING PULSE RATE AMONG EXPERIMENTAL GROUP AND CONTROL GROUPS**

Adjusted post test mean		Source of variance	Sum of squares	df	Mean squares	‘F’ Ratio
Hypoxic Training Group	Control Group					
66.85	71.3	Between	190.40	1	190.4	67.76*
		Within	103.81	37	2.81	

\* Significant at 0.05 Level of confidence (1 df 37 is 2.03)

Table-1 shows that the F-ratio value of 67.76 for adjusted post test mean of Hypoxic training group and Control group on resting pulse rate is higher than the required table value of 2.03 for significance with df 1 and 37 at 0.05 level of confidence. The results of the study indicated that there is a significant difference

between the adjusted post-test means of Hypoxic training group and Control group on resting pulse rate. The adjusted post mean values of Hypoxic training group and Control group on resting pulse rate are graphically represented in the Figure -1.



**FIGURE 1**  
**ADJUSTED POST MEAN VALUES OF HYPOXIC TRAINING GROUP AND CONTROL GROUP ON RESTING PULSE RATE**

#### CONCLUSION

The results reveals that the post test and adjusted post test of Resting Pulse Rate found to be significant at 0.05 level of confidence. Experimental Group showed significant improvement due to efficiency of Hypoxic Training.

#### REFERENCES

1. Dick Frank W.(1980), *Sporting Training Principles*, Great Britain: University Press Cambridge.
2. Guyton Arthur. C.(1985). *Textbook of Medical Physiology*, Philadelphia, W.B. Saunders company.
3. Lissitsyn. V.(1997).The INH method increases Life Expectancy, *Journal of Physiology*.