



## EFFECT OF PARCOURSE TRAINING AND INTERVAL TRAINING ON SELECTED BIOCHEMICAL VARIABLES

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### Abstract

The purpose of the study was to assess the effect of parcourse training and interval running on selected biochemical variables. To achieve this purpose of the study, forty five male students studying Bachelor's Degree in the Faculty of Agriculture, Annamalai University, Annamalai Nagar, Tamil Nadu, India. The selected subjects were divided into three equal groups of fifteen subjects each at random. Group I underwent parcourse training, Group II underwent interval training, Group III acted as control. The selected criterion variable namely triglycerides was assessed before and after the training period. The data collected from experimental group I, group II and group III prior to and after the completion of the training period were statistically analysed for significant difference if any, by applying Analysis of covariance (ANCOVA). Whenever, the obtained 'F' ratio for the adjusted post test mean was found to be significant, the Scheffe's test was applied as post hoc test to determine the paired mean differences, if any. The .05 level of confidence was fixed to test the level of significance which was considered as an appropriate

**Keywords:** Pranayama, HDL , LDL.

### INTRODUCTION

Sport is an activity that is governed by a set of rules or customs and often engaged in competitively. Sports commonly refer to activities where the physical capabilities of the competitor are the sole or primary determinant of the outcome (winning or losing), but the term is also used to include activities such as mind sports (a common name for some card games and board games with little to no element of chance) and motor sports where mental acuity or equipment quality are major factors. Sport is commonly defined as an organized, competitive and skillful physical activity requiring commitment and fair play. Some view sports as differing from games based on the fact that there are usually higher levels of organization and profit (not always monetary) involved in sports. Accurate records are kept and updated for most sports at the highest levels, while failures and accomplishments are widely announced in sports news. "Fitness is the capacity of the individual to live and function effectively, purposefully and jest fully. Here and now and to meet confidently the problems and crisis which are among life's expectations. A person is 'physically fit' when he/she meets a specific level or standard of physical performance for a specific situation, occupation or activity. The optimum or desirable level of fitness varies considerably according to the requirements. An individual with high level of physical fitness is one who has great stamina, strength, muscular endurance and co-ordination. Fitness is individualistic, each person has a different combination of factors that makes up his physical fitness. Fitness is changeable, variable and altered by activity and inactivity. Medical and dental care, health habits, rest and relaxation, nutrition, diseases, motivation and attitude affect fitness.

Sport training is necessary for improving sports performance. The sports performance as any other type of human performance is not the product of one single system or aspect of human personality. On the contrary it is the product of the total personality of the sports person. The personality of a person has several dimensions e.g., physical fitness, physiological, social and psychic. In order to improve sports performance the social and psychic capacities of the sports person also have to be improved in addition to the physical and physiological ones. In other words the total personality of a sportsman has to be improved in order to improve his performance. Sports training therefore directly or indirectly aim at improving the personality of the sportsman. No wonder therefore sports training is an educational process.

There are two basic physiological considerations that need to be addressed in designing any conditioning program. First, the major source of energy systems [in terms of power (calories per minute) and capacity (total amount of calories)] utilized to perform the given activity must be identified. The two anaerobic energy systems (ATP- PC and lactic acid) are involved in physical exertion lasting less than two minutes. The power potential for these energy systems is moderate to high while their capacity to sustain the work is moderate to low. Contrariwise, the oxidative energy system has a low power potential with a high capacity to sustain the physical activity. It is important to elucidate that at any moment during training all three energy systems will be involved. However, the training program will indicate which energy system is being stressed.

**METHODOLOGY**

The purpose of the study was to assess the effect of parcourse training and interval running on selected biochemical variables. To achieve this purpose of the study, forty five male students studying Bachelor's Degree in the Faculty of Agriculture, Annamalai University, Annamalai Nagar, Tamil Nadu, India. The selected subjects were divided into three equal groups of fifteen subjects each at random. Group I underwent parcourse training, Group II underwent interval training, Group III acted as control. The selected criterion variable namely triglycerides was assessed by Boeringer Mannheim Kit before and after the training period. The data collected from experimental group I, group II and group III prior to and after the completion of the training

period were statistically analysed for significant difference if any, by applying Analysis of covariance (ANCOVA). Whenever, the obtained 'F' ratio for the adjusted post test mean was found to be significant, the Scheffe's test was applied as post hoc test to determine the paired mean differences, if any. The .05 level of confidence was fixed to test the level of significance which was considered as an appropriate

**ANALYSIS OF THE DATA**

The data collected prior and after the experimental period on triglycerides on parcourse training group, interval training group and control group were analysed and presented in table - I.

**TABLE - I**  
**ANALYSIS OF COVARIANCE ON TRIGLYCERIDES OF PARCOURSE TRAINING GROUP INTERVAL TRAINING GROUP AND CONTROL GROUP**

	Parcourse Training Group	Interval Training Group	Control Group	SOV	Sum of Squares	df	Mean Square	'F' ratio
<b>Pre- test Mean</b>	106.93	106.87	104.53	<b>B:</b>	56.04	2	28.022	0.492
<b>S.D.</b>	8.940	5.540	7.772	<b>W:</b>	2394.44	42	57.01	
<b>Post-test Mean</b>	106.40	105.40	104.80	<b>B:</b>	19.60	2	9.80	0.174
<b>S.D.</b>	6.599	7.434	8.351	<b>W:</b>	2359.6	42	56.181	
<b>Adjusted Post-test Mean</b>	105.663	104.723	106.213	<b>B:</b>	16.806	2	8.403	0.786
				<b>W:</b>	438.381	41	10.692	

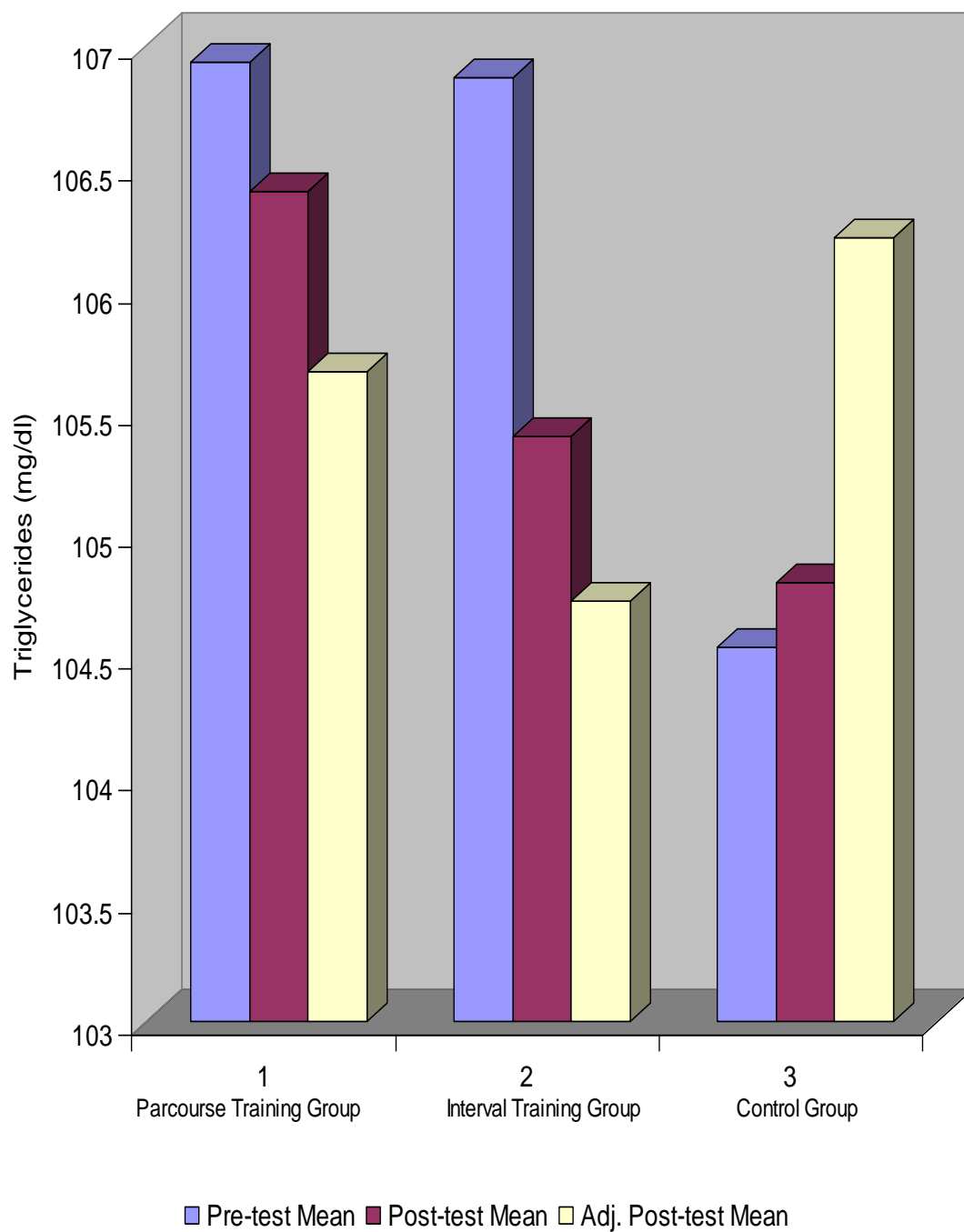
(The table value required for significance at .05 level of confidence with df 2 and 42 and 2 and 41 were 3.21 and 3.22 respectively).

Table -I shows that the pre-test means on triglycerides of parcourse training, interval training and control groups were  $106.93 \pm 8.940$ ,  $106.87 \pm 5.540$  and  $104.53 \pm 7.772$  respectively. The obtained 'F' ratio value of 0.492 for pre-test score of parcourse training, interval training and control groups on triglycerides was less than the required table value of 3.21 for significance with df 2 and 42 at .05 level of confidence.

The post-test mean values of triglycerides for parcourse training, interval training and control groups were  $106.40 \pm 6.599$ ,  $105.40 \pm 7.434$  and  $104.80 \pm 8.351$  respectively. The obtained 'F' ratio value of 0.174 for post-test scores of parcourse training, interval training and control groups was lesser than the required table

value of 3.21 for significance with df 2 and 42 at .05 level of confidence.

The adjusted post-test mean values of parcourse training, interval training and control groups were 105.663, 104.723 and 106.213 respectively. The obtained 'F' ratio value of 0.786 for adjusted post-test scores of parcourse training, interval training and control groups was lesser than the required table value of 3.22 for significance with df 2 and 41 at .05 level of confidence. The above statistical analysis indicates that there was no significant decrease in triglycerides after the respective training periods. The mean values on triglycerides of parcourse training, interval training and control groups were graphically represented in figure - I.



**FIGURE I**  
**BAR DIAGRAM SHOWING THE MEAN VALUES OF PARCOURSE TRAINING GROUP INTERVAL TRAINING GROUP AND CONTROL GROUP ON TRIGLYCERIDES**

**CONCLUSION**

Triglycerides did not altered significantly for both the training groups. There is no significant change on Triglycerides because of the parcourse training and interval training.

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