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EFFECT OF PRANAYAMA TRAINING ON HIGH DENSITY LIPOPROTEIN AND LOW DENSITY LIPOPROTEIN OF COLLEGE MEN

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Abstract

The purpose of this study was to find out the effect of pranayama training on high density lipoprotein and low density lipoprotein of college men. The research scholar selected 40 college men students from Rastriya Sanskrit Vidya Peetha Deemed University College, Tirupathi, Andhara Pradesh. Their ages were ranged from 21 to 25 years. The subjects were divided into two equal groups. Group-I consist 20 subjects called as experimental group and group-II consist of 20 subjects called as control group .The group -I was assigned to pranayama training for a period of 12 weeks. The control group was not undergo in any kind of training. The dependent variables namely high density lipoprotein and low density lipoprotein was selected and measured by lipid profile test (lab test) for this study. The data was analyzed by the use of paired't, test. The obtained 't' ratio was tested for significance at 0.05 level of confidence. The analysis of the data revealed that there was a significant improvement on the selected dependent variables namely high density lipoprotein and low density lipoprotein by the application of pranayama training programme.

Keywords: Pranayama, HDL , LDL.

INTRODUCTION

Yoga provides one of the best means of self improvement and helps to attain one's full potentiality. In the advanced stages of yoga the super conscious states are attained which results feeling of bliss, deep peace and the emergence of psychic powers. It supply of energy and removes any interference to the transmission of energy throughout the body. Pranayama is a sanskrit word, meaning extension of the life force. The word composed of two snaskrit words 'prana' the 'life force' or 'vital energy', particularly 'ayama' means extend or drawn out the breath. The origin of this yogic discipline lies in ancient Hinduism. In Patanhali's astanga yoga the pranayama is the third limb. Which is explaining about control over the breath. The practice of pranayama makes the respiratory system and works up to its optimum, ensuring proper supply of oxygen to the blood and improves circulation throughout the body. Bio-chemical, sometimes called biological chemistry, is the study of chemical processes with and relating to living organisms. By controlling information flow throw bio-chemical signaling and the flow of chemical energy through metabolism, biochemical processes give rise to the complexity of life. Bio- chemical study such things as the structures and properties of biological molecules, proteins, carbohydrates, lipids and nucleic acids. Yogic studies in the field of medicine suggest that yoga provides the optimum balancing of physiological, as well as biochemical wellbeing.

PRANAYAMA

"Pranayama is control of Breath". "Prana" is breath or vital energy in the body. On subtle levels prana represents the pranic energy responsible for life or life force, and "ayama" means control. So Pranayama is "Control of Breath". One can control the rhythms of pranic energy with pranayama and achieve healthy body and mind.

Patanjali in his text of Yoga Sutras mentioned pranayama as means of attaining higher states of awareness, he mentions the holding of breath as important practice of reaching Samadhi. Hatha Yoga also talks about 8 types of pranayama which will make the body and mind healthy.

Five types of prana are responsible for various pranic activities in the body, they are Prana, Apana, Vyan, Udana & Samana. Out of these Prana and Apana are most important. Prana is upward flowing and Apana is downward flowing. Practice of Pranayama achieves the balance in the activities of these pranas, which results in healthy body and mind.

METHODOLOGY

For the purpose of the study 40 college men students from Rastriya Sanskrit Vidya Peetha Deemed University College, Tirupathi, Andhara Pradesh. Their ages were ranged from 21 to 25 years. The subjects were divided into two equal groups. Group-I consist 20 subjects called as experimental group and group-II consist of 20 subjects called as control group .The group -I was assigned to pranayama training for a period of 12 weeks. The control group was not undergoing any kind of training. The subjects were tested on the selected

dependent variables namely high density lipoprotein and low density lipoprotein was tested with lipid profile test before and after the training period. The collected data was treated by using paired 't'-test. The level of confidence was fixed at 0.05 level.

RESULTS OF THE STUDY

TABLE-I
COMPUTATION OF't' RATIO BETWEEN THE PRE AND POST TESTS ON HDL OF EXPERIMENTAL AND CONTROL GROUPS

Group	Test	M	SD	σ DM	DM	t-ratio	'p' value
Experimental	**Pre Test**	44.75	3.22	0.31	3.00	9.75*	0.01
	Post Test	47.75	2.73				
Control	**Pre Test**	43.40	3.60	0.60	0.40	0.67	0.51
	Post Test	43.00	3.43				

* Significance at 0.05 level.

The table I indicates that there was a significant improvement on the high density lipoprotein through the selected pranayama training. It reveals that the obtained t-ratio of HDL 9.75 was significantly improved, because the 'p' value was lesser than the 0.05. So there was a significant improvement on the high density lipoprotein between the pre and post tests of experimental group, where as the control group showed no significant improvement. Hence the results indicated that the significant improvement on the high density lipoprotein was due to the pranayama training alone.

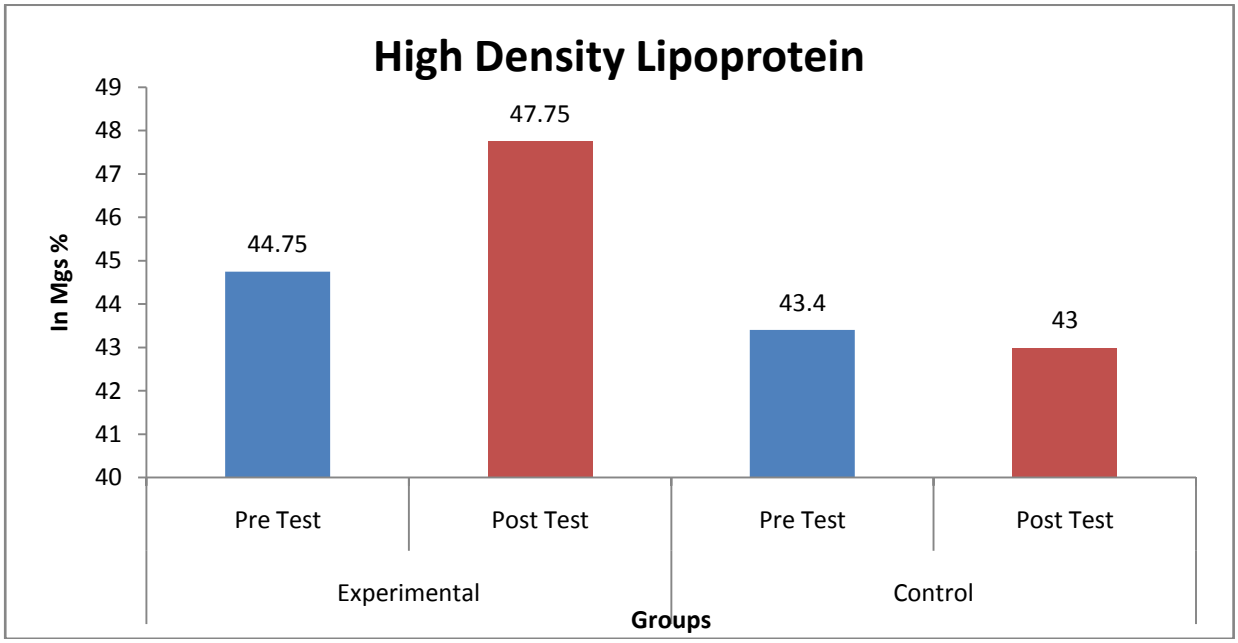

FIGURE I
THE FIGURE SHOWING THE MEAN DIFFERENCE OF PRE AND POST-TESTS SCORES ON HDL OF EXPERIMENTAL AND CONTROL GROUPS

TABLE-II
COMPUTATION OF't' RATIO BETWEEN THE PRE AND POST TESTS ON LDL OF EXPERIMENTAL AND CONTROL GROUPS

Group	Test	M	SD	σ DM	DM	't' ratio	'p' value
Experimental	Pre Test	100.95	2.48	0.62	5.90	9.53*	0.01
	Post Test	95.05	3.22				
Control	Pre Test	99.15	1.95	0.49	0.10	0.20	0.84
	Post Test	99.05	1.82				

* Significance at 0.05 level.

The table II indicates that there was a significant reduction on the low density lipoprotein through the pranayama training. It reveals that the obtained 't'ratio 9.53 was significantly differ because the 'p' value was lesser than the 0.05. So there was a significant reduction on the low density lipoprotein between the pre and post tests of experimental group, whereas the control group showed no significant reduction. Hence the result indicated that the significant reduction on the low density lipoprotein was due to the pranayama training alone.

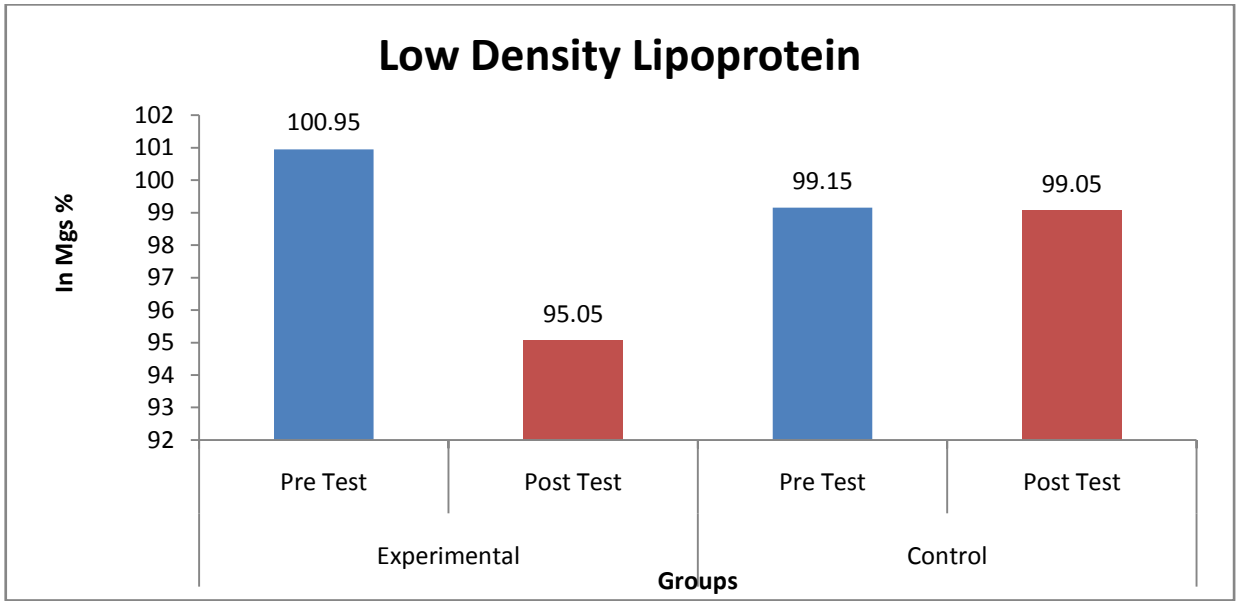

FIGURE II
THE FIGURE SHOWING THE MEAN DIFFERENCE OF PRE AND POST-TESTS SCORES ON LDL OF EXPERIMENTAL AND CONTROL GROUP

DISCUSSION ON FINDINGS

The result of the study reveals that the twelve weeks of pranayama training on the selected dependent variables, there was a significant improvement on the HDL. It reveals that the obtained t-ratio of HDL 9.75 was significantly improved because the 'p' value was lesser than the 0.05. So there was a significant improvement on the HDL between pre and post tests of the experimental group, whereas the control group showed no significant improvement. Hence the result indicates that the significant improvement on the HDL was due to the pranayama training alone. The result of the study is in consonance with the research done by **Deepa S Rathod and Sakpal Hoovanna. (2017).**

The result of the study reveals that the twelve weeks of pranayama training on the selected dependent variable there was a significant reduction on the LDL. It reveals that the obtained t-ratio 9.53 was significant because the 'p' value was lesser than the 0.05, level of confidence. So there was a significant reduction on the

LDL between pre and post tests of the experimental group, whereas the control group showed no significant reduction. Hence the results indicated that the significant reduction on the LDL was due to the pranayama training alone. The result of the study is in consonance with the research done by **Deepa S Rathod and Sakpal Hoovanna. (2017).**

CONCLUSION

It was concluded that there was a significant improvement on the selected dependent variables namely HDL and LDL by the application of pranayama training.

REFERENCE

1. Deepa S Rathod and Sakpal Hoovanna. (2017). effects of yogasanas on physiological and psychological variables of high school girls. *International Journal of Physical Education, Sports and Health*, 4(3), 315-317.