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P Senthil
Ph.D Research Scholar,
Sri Ramakrishna Mission
Vidyalaya Maruthi College of
Physical Education, Coimbatore,
Tamil Nadu, India

Dr. T Jayabal
Associate Professor, Sri
Ramakrishna Mission Vidyalaya
Maruthi College of Physical
Education, Coimbatore,
Tamil Nadu, India

Effect of varied combination of brisk walking, own body resistance training and yogic practices on selected bio-chemical variables of type II diabetes mellitus men

P Senthil and Dr. T Jayabal

Abstract

This study was designed to investigate the influence of Effects of varied combination of brisk walking, own body resistance training and yogic practices on selected bio-chemical variables of type II diabetes mellitus for men. To achieve the purpose of the study (N=45) forty five type II diabetes mellitus men were randomly selected from residing around from, Anthiyur (clinical center), Erode. as subjects. Their age ranged between 45 to 50 years. They were divided into three equal groups, each group consist of fifteen subjects, The group-I(n=15) underwent brisk walking with own body resistance training programme, group -II(n=15) underwent combination of brisk walking, own body resistance training and yogic practices, control group (n=15) acted as control group that did not participate in any special activities apart from their regular curricular activities. A pilot study was conducted to assess the initial capacity to the subject in order to fix the load. The following variables were chosen namely. Body mass index, low density lipo-protein (LDL), high density lipo-protein (HDL). The data were collected before (pretest) and after the experimental period of 12 weeks (post-test) in identical manner. Wherever the t'ratio for adjusted post-test was found to be significant the paired mean difference among the groups. The level of significance was fixed at 0.05 level of confidence.

Keywords: Type II diabetes mellitus, body mass index, low density lipo-protein, high density lipo-protein and yoga

Introduction

Physical exercise is important for maintaining physical fitness and can contribute to maintaining a healthy weight, regulating digestive health, building and maintaining healthy bone density, muscle strength, and joint mobility, promoting physiological well-being, reducing surgical risks, and strengthening the immune system. Some studies indicate that exercise may increase life expectancy and the overall quality of life. People who participate in moderate to high levels of physical exercise have a lower mortality rate compared to individuals who by comparison are not physically active. Moderate levels of exercise have been correlated with preventing aging by reducing inflammatory potential. A lack of physical activity causes approximately 6% of the burden of disease from coronary heart disease, 7% of type 2 diabetes, 10% of breast cancer and 10% of colon cancer worldwide. Overall, physical inactivity causes 9% of premature mortality worldwide.

Statement of the Problem

The purpose of the study is to find out the effect of varied combination of brisk walking, own body resistance training and yogic practices on selected bio-chemical variables of type II diabetes mellitus men.

Materials and Methods

The 45 subjects were randomly selected from type II diabetes mellitus men residing around from Anthiyur and Erode and their age ranged from 45 to 50 years. They were divided into three equal groups, each group consist of fifteen subjects, The group-I(n=15) underwent brisk walking with own body resistance training programme, group-II(n=15) underwent combination of brisk walking, own body resistance training and yogic practices, control

Correspondence

P Senthil
Ph.D Research Scholar,
Sri Ramakrishna Mission
Vidyalaya Maruthi College of
Physical Education, Coimbatore,
Tamil Nadu, India

group (n=15) acted as control group that did not participate in any special activities apart from their regular curricular activities. A pilot study was conducted to assess the initial capacity to the subject in order to fix the load. The following

variables were chosen namely Body mass index, low density lipo-protein (LDL), high density lipo-protein (HDL). The data were collected before (pretest) and after the experimental period of 12 weeks (post-test) in identical manner.

Criterion Measures

SL. No	Variables	Test	Unit Of Measures
1	Body mass index	Weight / Height 2	of percentage Score in terms
2	Low density lipo-protein	TCHO-HDL-VLDL=LDL	mg/dl
3	High density lipo-protein	Phosphotungstate method	mg/dl

Results

The data collected on Body mass index, Low density lipo-protein and High density lipo-protein among experimental

and control groups were analysed and the results were presented in Table – I.

Mean Value on Selected Criterion Variables among Experimental Groups and Control Group

Variables	Group Name	BWRG	BWRYG	Control Group	't' Ratio
Body mass index	Pre-test Mean ± SD	27.21±3.37	27.35 ± 2.74	27.20 ± 1.85	3.17
	Post-test Mean ± SD	25.37 ± 2.46	24.85 ± 1.95	26.12 ± 1.08	
Low density lipo-protein	Pre-test Mean ± SD	157.4 ± 4.79	146.7 ± 8.20	145.2 ± 8.24	5.28*
	Post-test Mean ± SD	127.2± 7.70	129 ± 7.42	144.7 ± 7.54	
High density lipo-protein	Pre-test Mean ± SD	44.25 ± 3.35	48.05± 4.43	43.75± 4.33	6.03*
	Post-test Mean ± SD	48.05± 4.25	45.5± 4.36	43.60 ± 3.25	

The table values required for significance at 0.05 level of confidence.

Table – I shows that pre and post-test mean values of Body mass index is 27.21, 25.37 of BWRG group, 27.35, 24.85 of BWRYG group and 27.20, 26.12 of Control Group. The mean value of Low density lipo-protein means value were 157.4, 127.2 of BWRG group, 146.7, 129 of BWRYG group and

145.2, 144.7 of Control Group, shows that pre and means post-test of High density lipo-protein means value were 44.25, 48.05 of BWRG group, 48.05, 45.5 of BWRYG group and 43.75, 43.60 of Control Group.

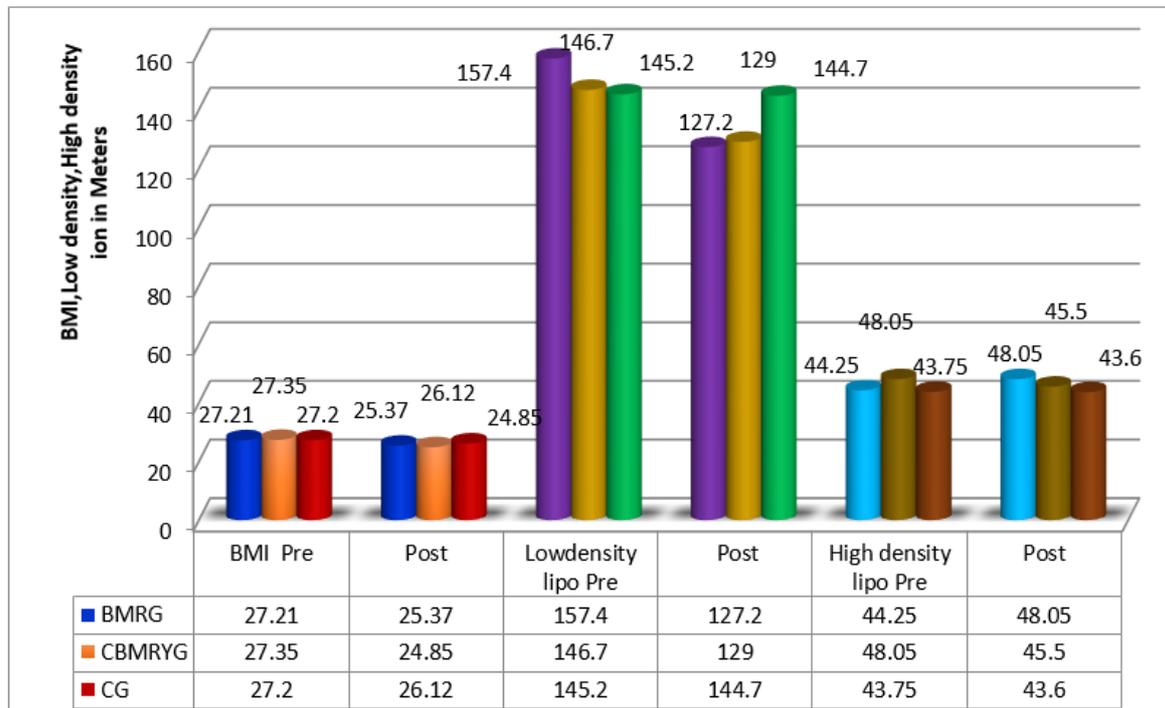


Fig: The Graph Showing the Mean Differences of the Pre test, Post-test on BMI, Low density, High density lipo protein of Experimental and Control group of type II diabetes mellitus men.

Discussion

Based on the results of comparative effects, it was observed that the treatment of combination of brisk walking, own body resistance training and yogic practices on selected biochemical variables were found to be better in the development of Body mass index, Low density lipo-protein, High density lipo-protein when compared to combination of brisk walking

group and control group mentioned above table. Result of which may develop the abilities of endurance in terms of muscular and cardio- respiratory. Following this, own body resistance training and yogic practices group it develops the physical, mental and physiological, bio chemical aspects through practicing asanas, pranayama and meditation.

Conclusions

Twelve weeks of combination of brisk walking, own body resistance and yoga practices significantly improved the Body mass index, Low density lipo-protein, High density lipo-protein for the type II diabetes mellitus men.

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