



INTEGRATED APPROACH OF VETHATHIRI MAHATRISHI'S SKY OF SKY YOGA ON LIPID PROFILE LEVEL - A PILOT TRIAL

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INTRODUCTION:

YOGA AND HEALTH: "The only healthy man is a Buddha." Health, as we know it to be, does not merely mean the absence of disease. Health is a positively vibrant state of being that the individual experiences through his efforts.

SHRI VETHATHIRI MAHARISHI: Shri Vethathiri Maharishi has formulated a complete science of living is Simplified Kundalini Yoga (**SKY**) which includes simplified Physical exercise, Simplified Kayakalpa exercise, Simplified mediation, and Introspection for the betterment of mankind. He asserts that training of the mind, Introspection and reformation of negative habits are absolutely necessary for achieving success, health, peace, happiness and wisdom. Shri Vethathiri Maharishi has received knowledge of the origin and functions of the cosmos and all aspects of life, as Nature revealed to his inner vision. During these years he has spontaneously written over 2000 poems on philosophical subjects. He remains dedicated to serving his fellow beings by conveying his understanding of universe and the One Supreme Power through his speeches and writings. In the Indian Philosophical tradition, his philosophy corresponds to pure advaita, it may be called pantheistic monism. His language and attitudes are contemporary, non-sectarian and non-dogmatic. As of date, he has authored about 70 books in Tamil and English.

SIMPLIFIED KUNDALINI YOGA: Simplified Physical exercises, Simplified Kaya Kalpa Yoga, Simplified Kundalini Meditation, Simplified Introspection and Self-realization.

SIMPLIFIED PHYSICAL EXERCISE: Physical exercise ensures the proper flow of blood, heat, air, energy and bio-magnetic circulation, leading to better health and general wellbeing. The system comprises seven sections dealing with every part of the body. They are simple enough to be practiced daily by anyone from eight to eighty. Yogi raj Shri Vethathiri Maharishi after years of intense research has systematized a series of exercises that is suitable for all climates and all sections of the human community in the contemporary age. This is the exercise for body and mind. He practiced them first then experimented the same on others. When he found positive effects and he advocated these exercises to the world. These exercises do not harm any part. Do not take more time. Blood circulation, heat circulation, respiration, and all systems become normal. As they function normally and effectively, these exercises prevent diseases. Inner organs also function effectively by these exercises. All exercises except a few, need to be done by closing the eye. Because, one has to take his mind to the part where his/her concentration should lie. Movements should be soft and gentle. There would not be any sweating.

There are two types of simplified exercises: Body postures, Movements.

Blood, heat, air circulations are in three different layers in human body. When the body is in the standing position the more dense blood flows downwards because of the gravity. Air comes up. If in a lying position the bottom side gets the blood the upper side gets the air circulation. If these movements are given continuously a regulation in the flow of air and blood happen which in turn regulates the body functions. By hand movements, leg movements, body movements slowly and a little fast, the blood circulation will be maintained at a normal speed. And also the parts of the body get cleansed. The system of physical exercises developed by Shri Vethathiri Maharishi after years of intense research fulfils the need of maintaining the proper circulation of blood, heat, air, energy and bio-magnetism, ensuring maintenance of health and prevention of disease in a gentle way. It develops the immunity system and thus acts as a preventive and as a curative to various diseases.

SIMPLIFIED KAYA KALPA YOGA: Through this, sexual energy is transmuted into spiritual energy by directing it to the crown chakra and beyond. As this practice is a natural restructuring process of the body. Disease, ageing and death are the three factors that everyone has to meet in his life. Kayakalpa exercise is rejuvenating the life-force particles. Kayakalpa is a specialized field of practice revered within the Ayurveda and Siddha medical systems of India as the ideal treatment for health, vitality, longevity and higher consciousness. The name is from the Sanskrit kaya (body) and kalpa (rejuvenation). An applied alchemy, Kayakalpa frees the vital energy by purifying and nurturing the body, mind and psyche with specific medicinal and therapies. In this process, the regenerative powers within are awakened, creating a magnetic and vibrant being whose consciousness is transformed for the fulfillment of their life purpose. In Kayakalpa, bodily regeneration and degeneration is considered to be the by-product of two main cellular processes of growth (anabolic), and decay (catabolic). It is essential to bring these twin processes into equilibrium and harmony to attain an optimum cellular metabolic state - excellent health.

THE AIM OF KAYAKALPA EXERCISE: Longevity of life, slows down ageing and maintaining youthfulness, to lead a disease free healthy life.

SIMPLIFIED KUNDALINI MEDITATION: This is a form of meditation to merge the mind with the subtle life force. This practice reduces the frequency of brain waves, enhances awareness, intelligence and understanding. Sincere practice can advance one from limited body consciousness to cosmic consciousness. This meditation includes a separate technique to strengthen the resistance of the mind and body to adverse effects of planetary positions. This system includes practices to understand and increase one's personal bio-magnetism for optimum physical and mental strength. One is also taught to use bio-magnetism for healing others by passing energy.

INTROSPECTION: Meant for purification of the self, it includes self-analysis to sublimate the personality. To enjoy peace, prosperity, health and happiness, one must eliminate undesirable aspects of one's personality. Introspection is a valuable guide for selecting desirable habits of thought, word and deed and rejecting the unwanted ones. The Five primary aspects of introspection are: Moralization of desires, Neutralization of anger, Eradication of worries, Analysis of thoughts, Realization of self.

LIPIDS: The lipids constitutes a heterogeneous group of substances, their main characteristic being that they are insoluble in water. They are split in to two types.

1. The simple lipids (Cholesterol, fatty acids)
2. The complex one (Triglycerides = glycerin with three fatty acid molecules, Cholesterol esters = cholesterol with fatty acids, Phospho lipids = glycerin with fatty acids and phosphorus, sphingolipids=ceramides and sphingomyelins).

Depending on the number of double bonds that is contained in the molecules of their fatty acids, the lipids are distinguished by being saturated, mono-unsaturated or poly-unsaturated (with one, one or more double bonds respectively).The lipids play a very important role in the physiologic functions of the body. They are used for storage but also for production of energy when needed (triglycerides and fatty acids in the adipose tissues) , for heat insulation , for steroid hormone and vitamin – D production (cholesterol), for the production of bile salts (cholesterol), for the structure of cell membranes (cholesterol and phospholipids) and for the coordination of various cellular activities (prostaglandins).

LIPID PROFILE: Lipid profile is a panel of blood tests that serves as an initial screening tool for abnormalities in lipids,such as cholesterol and triglycerides. Lipids are a group of fats and fat-like substances that are important constituents of cells and sources of energy. A lipid panel measures the level of specific lipids in the blood. Two important lipids, cholesterol and triglycerides, are transported in the blood by lipoprotein particles. Each particle contains a combination of protein, cholesterol, triglyceride, and phospholipid molecules. The particles measured with a lipid profile are classified by their density into high-density lipoproteins (HDL), low-density lipoproteins (LDL), and very low-density lipoproteins (VLDL).

Monitoring and maintaining healthy levels of these lipids is important in staying healthy. While the body produces the cholesterol needed to function properly, the source for some cholesterol is the diet. Eating too much of foods that are high in saturated fats and trans unsaturated fats (trans fats) or having an inherited predisposition can result in a high level of cholesterol in the blood. The extra cholesterol may be deposited in plaques on the walls of blood vessels. Plaques can narrow or eventually block the opening of blood vessels, leading to hardening of the arteries (atherosclerosis) and increasing the risk of numerous health problems, including heart disease and stroke. A high level of triglycerides in the blood is also associated with an increased risk of developing cardiovascular disease (CVD).

THE LIPID PROFILE TYPICALLY INCLUDES:

Low-density lipoprotein (LDL), High-density lipoprotein (HDL), Triglycerides , Total cholesterol Very low density lipo protein (VLDL), Cholesterol, HDL ratio.

HDL: Removes the cholesterol from the blood stream. It is a good cholesterol.

LDL: Deliver cholesterol to the body. It is bad cholesterol.

TRIGLYCERIDES: *A triglyceride (TG, triacylglycerol, TAG, or triacylglyceride) is an ester derived from glycerol and three fatty acids (from tri-and glyceride).[1] Triglycerides are the main constituents of body fat in humans.*

HDL	LDL	TRIGLYCERIDES	TOTAL CHOLESTEROL
			

RESEARCH STUDY:

TYPES OF RESEARCH: Experimental Research

STATEMENT OF THE PROBLEM: This research is aimed at scientifically studying and establishing the overall effect of SKY SIMPLIFIED PHYSICAL EXERCISE AND KAYAKALPA YOGA as a powerful intervention technique to control Lipid profile levels and Total cholesterol.

SIGNIFICANCE OF THE STUDY: This study was unique in suggesting the simplified Physical exercise and Kayakalpa yoga on lipid profile level and Total cholesterol.

DELIMITATIONS:

1. This study was delimited to Hyperlipidemia patients only.
2. Age of subjects was ranged from 40 to 60 years only. All selected subjects are men only and the independent variable was simplified Physical exercise and Kayakalpa yoga.
3. The dependent variable was LIPID PROFILE LEVELS AND TOTAL CHOLESTEROL.
4. To achieve the purpose of the study 60 samples selected at random and their range was aged group people (40-60). 30 samples were included in the experimental group and 30 samples were in controlled group individually and the duration of the study was three months.

HYPOTHESIS: It was hypothesized that there would be any significant differences in the experimental group on Complete Lipid profile levels and Total cholesterol.

STATEMENT OF THE PROBLEM: The purpose of the study was to find out the effect of Bio chemical changes in selected HyperlipidemiaMen by practicing Vethathiri maharishi's Kayakalpa yoga and simplified physical exercise regularly.

OBJECTIVES OF THE STUDY: The Aim of the study is to evaluate the Benefits through the application of Vethathiri Maharishis Kayakalpa yoga and simplified physical exercise for an effective management of Hyperlipidemia found among men of age group between (40-60) was taken.

METHODOLOGY: 1. The Experimental group comprising 30 men was subjected to Sky Physical exercise and Kayakalpa yoga for a period of three months. The second group namely Control group which also comprised of 30 men subjects went without any practice. The subjects n=60 were randomly assigned to two equal groups of 30 Hyperlipidemia patients in each. The groups were assigned as Simplified Physical exercises and Kayakalpa yoga. Daily they do the practices of Kayakalpa yoga and simplified physical exercise. To facilitate and guide home practice. Participants were given an audio recording (CD), sessions were held twice per week. They were regulated by the yoga instructor through phone and direct communication. Daily records of diary were maintained. Food restriction was given to the patients. In the beginning pretest scores were collected, after the experimental period of 3 months practices post test scores were measured for biochemical variables. Fasting blood samples were taken for testing lipid profile and Total cholesterol. Finally findings and solutions were drawn.

METHODS USED FOR TESTING LIPID PROFILE LEVEL:

1. TOTAL cholesterol = Enzymatic calorimetric method
2. HDL = Turbid metric method
3. LDL = Calculation method
4. VLDL = Calculation method

LIMITATIONS OF THE STUDY: The changes in climatic conditions such as temperature, atmospheric pressure, medicines taken for other disorders, by the subjects are not considered and certain factors like rest period, family history, economic conditions and other motivational factors will not be taken into consideration for this study.

INTERVENTION: Shri Vethathiri Maharishi's Simplified Physical Exercise and, Kayakalpa yoga.

DURATION OF THE INTERVENTION: 3 Months.

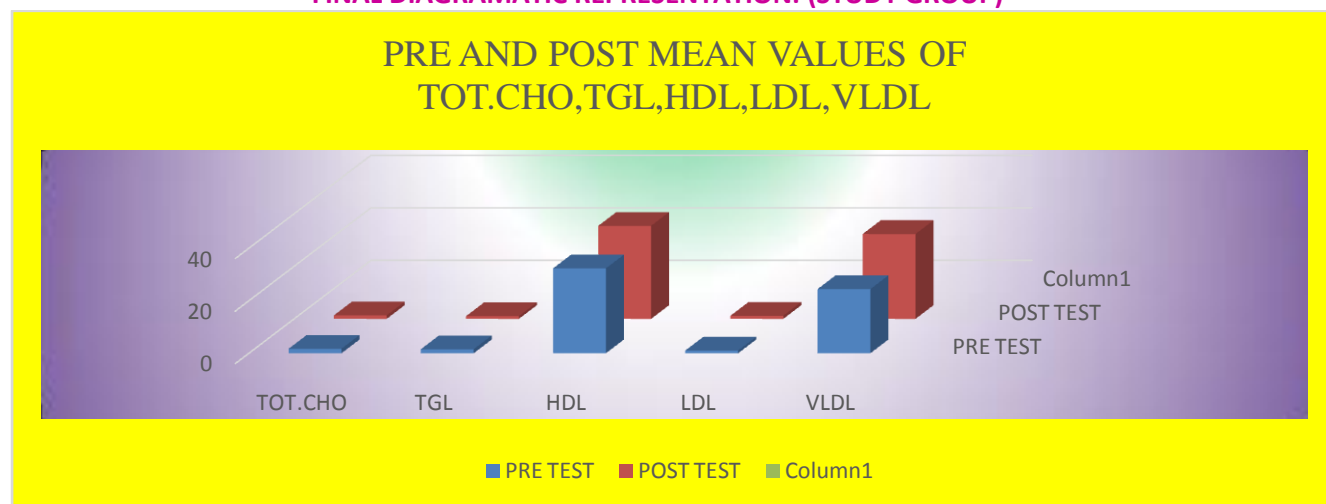
STATISTICAL ANALYSIS AND DESIGN: In this study the data for the study were analyzed using SPSS (Statistical Packages for Social Sciences Version 22).The following technique was adopted to treat the collected data in connection with established hypothesis and objectives of the study. In this study Paired sample t-test is a statistical technique that is used to compare two population means in the case of two samples that are correlated). In all cases 0.05 level of significance was fixed to test hypotheses.

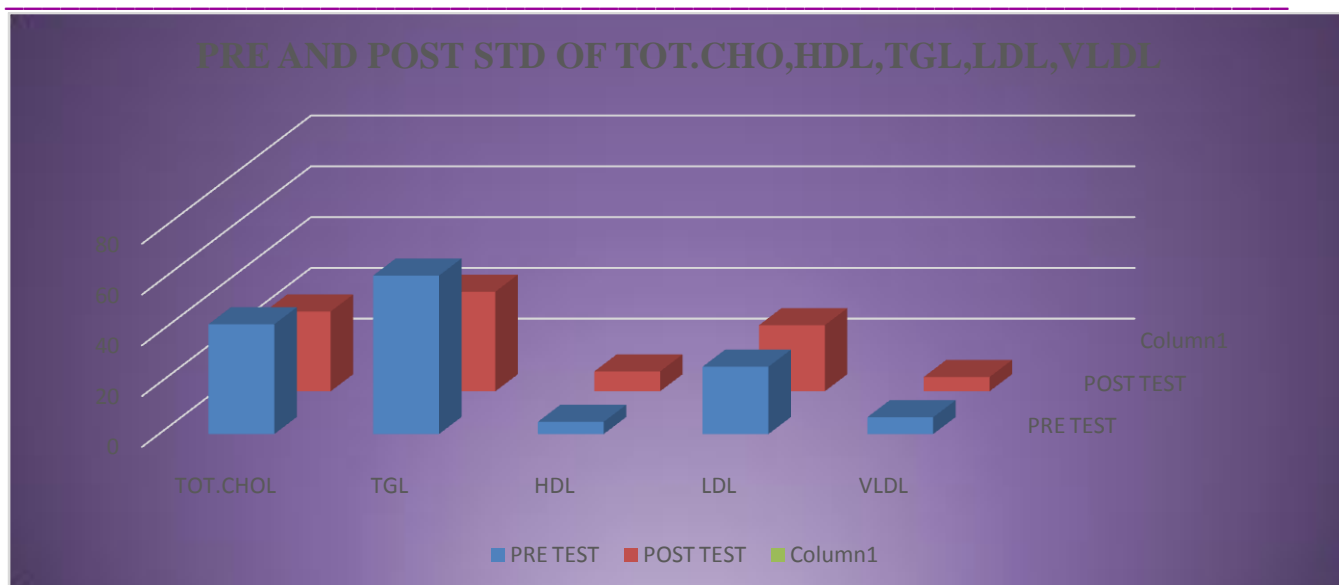
RESULTS:

TABLE.1 TOTAL CHOLESTEROL, HDL, LDL, VLDL PARAMETERS BEFORE AND AFTER YOGA:

S. NO	PARAMETERS	EXPERIMENTAL GROUP	CONTROL GROUP	P- VALUE EXPERIMENTAL	CONTROL GROUP
1	Total cholesterol (MEAN ± SD) mg/dl	6.5±20.34	3.5900±45.20	0.091 > 0.05	0.000 < 0.05
2	HDL(MEAN ± SD) mg/dl	1.16±5.04	3.13±6.34	0.215 > 0.05	0.011 < 0.05
3	LDL(MEAN ± SD) mg/dl	4.60±19.46	1.61±17.88	0.215 > 0.05	0.000 < 0.05
4	VLDL(MEAN ± SD) mg/dl	0.726±2.924	7.94±4.65	0.184 > 0.05	0.000 < 0.05
5	Triglycerides (MEAN ± SD) mg/dl	3.633±2.669	5.04±60.10	0.184 > 0.05	

FINAL DIAGRAMATIC REPRESENTATION: (STUDY GROUP)





DISCUSSION:

The primary reason for the elevation in HDL is an increase in lipoprotein lipase activity in response to SKY Physical exercise and Kayakalpa yoga. Lipoprotein lipase is the key enzyme for the breakdown of triglyceride-rich lipoproteins. On a long-term basis, the decrease of body fat that often accompanies endurance training may be a contributing factor for this lowering effect of triglycerides due to SKY Physical exercise and Kayakalpa yoga. Hence physical activity can help to cure the progression of heart diseases. First, exercise stimulates enzymes that help move LDL from the blood (and blood-vessel walls) to the Liver. From there, the cholesterol is converted into bile (for digestion) or excreted. So Physical exercise, expel more LDL from the body. SKY Exercise increases the size of the protein particles that carry cholesterol through the blood. (The combination of protein particles and cholesterol are called "lipoproteins;" it's the LDLs that have been linked to heart disease). SKY exercise AND KAYAKALPA YOGA increases the size of the protein particles that carry both good and bad lipoproteins."

CONCLUSION:

A preliminary method was been made to study the effect of simplified physical exercises and Kayakalpa yoga on lipid profile level and Total cholesterol. It was observed that the 3 months of Simplified Physical exercises and Kayakalpa yoga have significantly decreased the lipid profile level, and Total cholesterol among Hyperlipidemia Men when compared to the control group. So we conclude that Simplified Physical exercise and Kayakalpa yoga synthesized by Shri Vethathiri Mahahrishi is equally effective in reducing High Lipid profile level and Total cholesterol level to Normal level and could be used as an effective therapeutic intervention technique.