

# EFFECTS OF PHYSICAL EXERCISE ON DYSLIPIDEMIA

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## Abstract

To improve the lipid profile of the individual, it is recommended that lifestyle changes including regular exercise as well as dietary changes will prove highly beneficial (1). However, the goals of the exercise prescription program may vary depending on the form of dyslipidaemia. For example, sufferers of hyperlipidaemia should focus on losses of adiposity and body weight, as these factors influence Body Mass Index (BMI) scores which correlate to total cholesterol concentrations, and an exercise program that focuses weight loss can affect total cholesterol, LDL, HDL and triglyceride levels [2]. Aerobic exercise will be the base of the exercise program. Resistance training and flexibility programs will contribute to the exercise prescription plan, and do present positive outcomes to the patient, however do not contribute as much as aerobic exercise to the overall energy expenditure, necessary for dyslipidaemic patients. The U.S. Department of Health and Human Services [3] has recommended that for improvements in blood lipid profile, a minimum of 1,000 kcal/week exercise target has been established. The American College of Sports Medicine's Guidelines for Exercise Testing and Prescription suggest that dyslipidaemia patients should follow an exercise guideline similar to that of obese individuals, and this strategy is to maximise energy expenditure [4]. Physical inactivity in our country is responsible for 7 to 8.5% of the causes of chronic diseases and Cardiovascular. Recent year's atherosclerosis counted as underlying causes and a number of mortality and morbidity in developed countries and developing countries (World Heart Organization, 2003). Coronary diseases are among the most common causes of disability and mortality in modern times, and in the era of the 21st century. Except factors with known (genetic predisposition, age, sex, dyslipidaemia, disorders of apolipoproteins, high profession, mode of lifestyle, social conditions,...) in the etiology and high prevalence of cardiovascular disease presentation (CD) years important role is given to the psycho stress, especially physical inactivity as one of the factors predispose and risky on the rise in prevalence of CD. In the century that we are living, the manifestations of cardiovascular disease (CD), cerebrovascular, and diabetes have a very high prevalence of the consequences of their frequent appearance of acute myocardial infarction anginas pectoris, arterial hypertension due shocked by socio-economic life problems, psychological stress, etc. Therefore, physical activity, sports exercises, sports education should not imagine as a luxury or a privilege but as a necessity and the main postulate of the entire population in education, but also in increasing the number of hours of physical s breeding in all school levels. Background and objectives . The purpose of our thesis was to be verified and to document as well the positive effects of exercises and sports in the treatment of dyslipidaemia and prevention of the appearance of cardiovascular diseases and chronic diseases. Materials and methods of work. In the study (, cross-section ") were the total includes: No = 300 examined of whom 90(40 females and 50 males) were patients with cardiovascular disease (CD) , 8 months after myocardial infarction and after stenting within 6 days of the week have been physical exercise duration of 30-35 minutes during the day, while 60 patients (30 females and 30 males) who within the week have not had any kind of exercise and physical activity. From 300 examinations, 150 individuals were identical to healthy volunteers and patients (also by gender and average age) who served as the control group. In all patients and the control group (with normal-fed BMI) defined us and lipid profile. Statistical processing. Values obtained lipids (tp/ chol.HDL-ch, LDL-ch, TG) and control group are presented with mean values and standard  $X \pm SD$  devijacijon. where accounts where the correlation coefficient,  $r$  "statistical value,  $p$ " less than 1%,  $p < 0.0001$ . Conclusion: in conclusion may propose and suggest that much more to increase awareness, consciousness in the population through media broadcasts, electronic, print, television special programs, panfletave on the role of physical exercise, sports presentation on prevention of cardiovascular disease.

**Key words :** dyslipidemia, Exercise, cardiovascular diseases (CVD)

## 1 INTRODUCTION

Suggested for the intensity of the aerobic exercise should be between 40-70% of VO<sub>2</sub> Reserve or Heart Rate Reserve, meaning that it is not high intensity exercise. Several studies concur with this finding, with improvements in the blood lipid profile a result of the moderate intensity exercise (6,7) The recommended time for aerobic exercise is set at between 30-60 minutes, at the moderate intensity at least 5 times per week. And the daily recommendations can be split up, meaning that

the individual can perform the daily 60 minutes in several different sessions, and still see improvements in blood lipid profile(8). Resistance training will elicit positive results in target areas such as maintenance of lean body mass(9, 10), it may have effect on blood lipid profile(11,12). This training should be used in conjunction with aerobic exercise to improve overall fitness and health, as well as adding to total caloric expenditure. Patients may also partake in sports such as soccer

or swimming which predominantly use the aerobic system over extended periods of time, which will benefit the patient. There are other training styles that do have

Therefore early detection etiopathogenesis of all the above factors and their treatment and dietary medications at the initial stages of the disease may significantly affect the prevention and slowing the rapid pace of CD. Manifestations of atherosclerosis (Ath) presented with symptoms of ischemic heart disease, cerebrovascular insult and the manifestation of peripheral vascular disease. Atherosclerotic development processes is silent because its symptoms begin to show up when atheroma has gripped a narrow around 3/4 the interior of the artery (Eur Heart J 1998). Public health book, but is an obligation, welfare and investment in future generations and the wider population. In prevalence of disease presentation and pace of disease except cardiovascular impact basic perceptions disease, physical inactivity plays an important role, so through lectures, pamphlets, informational tools (special TV shows, electronic medias or magazines) should somehow oblige the general population to know and gets familiar with the consequences of physical inactivity and increased educational level on CD risks of physical inactivity and the role of sport and prevent these diseases. To speak to a healthy life and good health means in everyday life also involve physical activity with different exercises (walking, swimming fast, walking speed bike, soccer, basketball, volleyball, tennis, gym, running, sports exercises, yoga ...) regularly, these exercises which are one of the most important preferences for maintaining physical and mental health in answers by nature, as well as significantly reducing the risk of chronic cardiovascular diseases the population. Risk factors and physical inactivity worldwide sedentary counted as factors fourth degree appearance risk for chronic disease and cardiovascular (coronary disease, heart-felt, myocardial infarction, ischemic diseases etc.) atherosclerotic processes, manifested by appearance the early atherosclerosis, stroke, pressure (the pressure) and high blood pressure, obesity, responsible for some cancers such as breast, colmatation, type 2 diabetes, mental illness, muscular-skeletal diseases. Percent of parfi-ring of chronic diseases in countries with middle income fluctuates from 6.6 % -7.5 % while at countries with high income peqindjes rate ranges from 7.7-8.5%. There is quad

## 2 Material and Methods of work

Materials and methods of work. In the study (, cross-section ") were the total includes:  $N^0 = 300$  examined of whom 90(40 females and 50 males) were patients with cardiovascular disease (CD), 8 months after myocardial infarction and after stenting within 6 days of the week have been physical exercise duration of 30-35 minutes during the day, while 60 patients (30 females and 30 males) who within the

positive outcomes for the dyslipidaemic sufferer. For example, Tai Chi has been shown to produce a reduction in triglyceride, total cholesterol and LDL levels(13).

documenting facts and verified by many experts that every worldwide die annually over a 3.2 million physical inactivity due. According to the report on chronic diseases WHO (2011), Worldwide, 2008, physically inactive over 15 are over 31% of the adult females that are more with 34% versus 28% males. According level of physical inactivity is higher in countries with higher financial income and that over 25% compared to financial income countries where most lower inactivity rate fluctuates by-18.5% of the population. Close to 20-30% of the population who are physically inactive and not sports but are in higher risk of death compared with individuals who are physically active during the day and minimum 30 minutes dealing with dealing with sport, gymnastics. Numerous studies have proven multicentric that physical inactivity causes 21-25% of breast cancer and colon, 27% of type 2 diabetes and about 30% of heart disease and ischemic heart disease. Physical activity, exercise gym or running 150 minutes per week or 30 minutes per day for 30% reduces the risk from ischemic heart disease, diabetes of 27% and 21-25% of breast cancer and colon. Exercise and moderate physical activity, also lower risk for diseases presenting cardiovascular disease, stroke, arterial hypertension, depression and maintains body weight under control the adiposity (or being fat). Although other mechanisms Ath Pathophysiology, the details are still unknown but assumed that atherosclerosis appearance of the system and processes atherosclerotic cardiovascular cerebral arteries and peripheral arteries are favored by two factors riskant group (WHO. Cardiovascular Disease. Prevention and control. 2001/2002. One group of factors riskant factors such as gender, age, diabetes, genetic predisposition, and in the second count of variable factors as: dislipinated, arterial hypertension, smoking, obesity, psycho stress, sedentary lifestyle, profession, physical inactivity, lifestyle, positive history of cardiovascular disease (CD), hyperfibrinogenemia (increased level of fibrinogen in the blood), hyperhomocysteinaemia (abnormally high level of homocysteine in the blood) etc. Apolipoproteins disorders (Vink A, 2002).

week have not had any kind of exercise and physical activity. From 300 examinations, 150 individuals were identical to healthy volunteers and patients (also by gender and average age) who served as the control group. In all patients and the control group (with normal-fed BMI) defined us and lipid profile.

Table number 1: Presentation of the total number of screening (patients and control group) N<sup>o</sup> = 240

The total number of examiners = 240			
Patients tot. N <sup>o</sup> =150		Group controller N <sup>o</sup> =150	
F	M	F	M
54 ( 45%)	66 ( 55%)	50 ( 42 %)	70 ( 58 %)

Table number 3: Presentation of patients by gender and average age

Sex	Number	The average age ± SD
Male	66 ( 55 %)	56.40 ± 6.00
Female	54 (45 %)	55.80 ± 6.80

The average age of the patients was masculine = 56.40 ± 6:00, while the feminine gender was 55.80 ± 6.80 = average age difference between males and females according to statistics is isosignifikant  $p = 0.0005$ , which indicates a homogeneous groups (Tablenr 3)

Table number 4: Presentation of patients according to nationality

Sex	Macedonian ( 45%)		Albanian ( 55%)	
	Number	%	Number	%
Male	30	25.0	36	30.0
Female	24	20.0	30	25.0

Table number 5: Inclusion of control group by gender and average age

Sex	Number	The average age ± SD
Male	66 ( 55 %)	57.20 ± 7.00
Female	54 (45 %)	57.40 ± 6.70

Table number 6: Presentation of earned value total Koleterolit (CHT), TG, HDL-ch, LDL-ch and Apolipoproteins-B<sub>100</sub> (Apo-B100) examined patients (without exercise and physical ushtirme 30 minutes within 6 days of the week) and the group of healthy control individuals.

fraction of Lipid	Sex	patients without exercise	6 months after treatment physical exercise 30 minutes 6 days a weeks	Group controller N <sup>o</sup> =150
ChT mmol/l	F	6.20 ± 1.00 ↑	5.00 ± 0.40 ↓	4.60±1.30
	M	6.50 ± 1.20 ↑	5.10 ± 0.60 ↓	
TG mmol/l	F	3.30 ± 0.90 ↑	2.10 ± 0.70 ↓↓	1.30±0.58
	M	3.60 ± 0.80 ↑	2.12 ± 0.60 ↓↓	
HDL-ch (mmol/l)	F	1.10 ± 0.45 ↓	1.34 ± 0.50 ↑↑	1.60±0.70
	M	1.14 ± 0.60 ↓	1.36 ± 0.80 ↑↑	

LDL-ch	F	4.50 ± 0.72 ↑	3.12 ± 0.48 ↓↓	2.84±1.08
	M	4.80 ± 1.09 ↑	3.20 ± 0.74 ↓↓	
LDL/HDL	F	3.04 ± 2.06 ↑	1.85±1.10 ↓	1.70±1.24
	M	3.02 ± 1.48 ↑	1.80±0.89 ↓	
Apo-B <sub>100</sub> (0.5-1.60 g/L)	F	3.46 ± 0.95 ↑	2.10±0.40 ↓	1.05 ±0.25
	M	3.85 ± 0.90 ↑	2.30±0.25 ↓	

From self table 6. shows that the number of patients with CD but without exercise showed higher values of lipid fractions: CHT, TG, LDL-ch, Apo-B100 and the ratio between LDL / HDL (3:04 ± 2.06/3.46 ± 0.95), while lower values HDL-ch. All patients with CVD (were drug-free therapy hipolipemike) but with physical exercises every day from 30-35 minutes 6 days per week and showed a very good values of lipid profile by decreasing the CHT, TG, LDL-ch , and report ApoB100 LDL / HDL (2.10 ± 0.40/2.30 ± 25), and increased HDL-ch with p <0.001. In determi-ning the degree of dyslipidaemia values of the ratio between LDL / HDL parameter serve as safe and effective in the role of physical education and sports in the normalization and regulation of dyslipidaemia-hypercholesterolemia.

### 3 Results:

The results obtained from the examination of the lipid profile (Kol.Total, TG, HDL-ch, LDL-ch) and Apolipoprotein B-100, and the results obtained from the control group showed that patients with CD but without exercise were presented with high profile values of all lipid fracti-ons, Apo-B100 and LDL/HDL and lower values for HDL-ch compared with patients within 6 months of their daily regime had developed physical exercises and activities were taken spor-ting over 30 minutes within 6 days of the week to which examined a improvement of lipid profile by decreasing the CHT, TG, LDL-ch, LDL

ratio ApoB100 and / HDL (2.10 ± 0.40/2.30 ± 25) and the increase HDL-ch p <0.001 compared with the control group.

**Background and objectives :** The aim of our study was to verify and document the positive effects of exercise and sports in the treatment of dyslipidaemia (hypercholesterolemia, hyperthre-gliceridemy and prevention of the appearance of aterogjene processes in patients with cardio-vascular disease after myocardial infarction, after Stentingut after-BY passi and prevention of coronary of atherosclerosis early (premature) etc.

## 4 STATISTICAL MATERIAL PROCESSING EXAMINED

Statistical processing. Values obtained lipids (tpt/ chol.HDL-ch, LDL-ch, TG) and control group are presented with mean values and standard X ± SD devijacion. where accounts where the correlation coefficient, r "statistical value, p" less than 1%, p <0.0001. Conclusion:in conclusion may propose

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## 5 DISCUSSION

Since weight maintenance and calorie burn are crucial to these individuals, we want to focus on frequency and time. It is suggested by the American College of Sports Medicine (ACSM) that these individuals exercise ≥ 5 days per week to maximize caloric expenditure for 30-60 minutes per day. However, in order to promote or maintain weight loss, 50-60 minutes or more of daily exercise is recommended. An effective alternative to continuous physical activity is performing intermittent exercise of at least 10 minutes at a time to accumulate the recommended duration. Intensity is suggested at 40%-75% of Vo2R or HRR, and as discussed

before, the mode should be primarily aerobic physical activities involving large muscle groups, while also including flexibility and resistance training to supplement caloric expenditure. There are several things to keep in mind when training individuals with dyslipidemia. One of the most important is to consider other conditions your client may have and modify the exercise prescription to accommodate those needs. Some individuals who are taking lipid-lowering medications, specifically statins, may experience muscle soreness and weakness, also known as myalgia. If your clients begin to experience unusual muscle soreness when

exercising and are taking these medications, you should advise them to contact their physicians. Finally, it is important to remember that improvements in blood lipids and lipoproteins with aerobic exercise training may take several weeks to months, depending on a variety of factors. These include initial blood lipid and lipoprotein levels, weekly caloric expenditure, and the blood lipid parameter that is being targeted with exercise training. Recent studies have verified and proven that physical exercise, sports influence for a healthy longer, better and more prolonged. It is verifiable evidence that people (scientist Dr. Jay Smith of the Mayo Clinic in Minnesota state specialist in the field of sport) that deal regularly with sports live from 4-5 years more than people who do not at all or any kind of physical exercise. Scientist Smith says this is because regular exercise significantly help prevent cardiovascular disease, brain seizure and a number of other diseases. Physical inactivity is in Charge for 6% of all deaths in the world, while in the European region is responsible for about 10% of all deaths, or 600,000 deaths a year. Sport helps reduce stress, anxiety (which is one of the causes of insomnia, especially by stimulating the production of endorphins). A large number of studies Prospective UKPDS (United Kingdom Prospective Diabetes Study) have verified that between submission of CD, acute myocardial infarction (AMI) and stroke are extremely close correlation between them and act synergistically (Stratton IM, BMJ.2000). All the above phenomena have led many scientists to be more studies of lipid metabolism disorders and apolipoproteins, with their etiology and treatment and how their treatment. Scientists have verified that the presentation of atherosclerotic processes and early atherosclerosis (atherosclerosis well-ecox) in addition to the above factors plays an important role in years inactivity or physical. A large number of studies on metabolic disorders lipoproteins and verified have documented that patients with Diabetes Mellitus and Cardiovascular disease there tip.2 extremely high concentrations and increased production of cholesterol extremely small dense (LDL-cholesterol) compared with individuals without diabetes and other diseases. Increased cholesterol concentration of small and dense speeding oxidation process and glycolic trailer and activates the processes and mechanisms of plaque ruptures and atheroma atherosclerosis. Therefore during treatment of dyslipidemia great importance is given to correction and normalisation of values high cholesterol and prevent his own transformation in oxidized cholesterol (LDL-cholesterol or LDL-ch 6). Therefore, the American Association of Cardiologists (American association for Cardiology) in patients after acute myocardial infarction, coronary bypass, stenting, PTCA and recommends prefers absolutely in treating these patients for leveling and normalization of high lipid values and physical activity through exercise, normalization of body weight (property rights regularization obesity-BMIx-Body Mass Index), gym, walking, jogging, etc.. (according councils doctor) to be one of a number postulate and preferences. The primary purpose of these recommendations is to reduce LDL-cholesterol values <2.6 mmol / l (The reference values = <3.4 and high risk> 4.5 mmol / l) and increase in HDL-cholesterol values > 1.0 mmol / l (value reference = 0.68-1.70-mmol / l) values while reducing triglycerides (TG) 2.0 mmol/l- cross reference value = 0.688-1.70 mmol / l (1). Treatment of dyslipidemia of low-risk individuals can be corrected only with exercise, diet and weight decrease, risk patients with moderate physical exercises can and or drugs for menthol-statin or fibrate (if required), physical exercise and other methods nopharmacology in preventing the appearance of atherosclerosis early atherosclerotic processes not only serve as a measure of reducing macro-prvenuese but the extent of mortality and morbidity from cardiovascular

disease (LaRosa JC. 1998. Ekelund LG, 1998) to populate. A large number of decade prospectively have verified that physical exercise increases the level of lipoproteins cardioprotective HDL<sub>2</sub> (Clarson et al. 1995; Ping Li X. et al.: 2000,73(3)-231-236. Rader DJ.1999). In one year my study a randomized- NCEP -National Cholesterol Education Program showed no significant positive feedback reduce high values of LDL-cholesterol to individuals who in one year have not developed physical exercises but have attempted to reduce the fat with diet alone (Stefanik LM., et al.: 1998). Physical exercise influence in rule-min lipid profile by increasing the level of HDL-cholesterol on account of increased HDL<sub>2</sub> subfractions trailer and reduce the level of masculine triglycerid. A group scientists in their studies have verified that physical exercise (walking about 5 miles a week without strain) accompanied by music helps increase energy, and optimizing body. Physical exercise (light exercises to strengthen muscles, brisk walking 30 minutes a day, reducing fats and increasing consumption of fruits and vegetables ration) sport and physical culture play an important role against tumors, as in the initial stage, as the quality of life during treatment protects physical oncology. Activity cancer development, especially in the colon, prostate and breast. Regular physical activity is one of the most effective stress management. Preferably a minimum of once a week to visit centers including relaxation, breathing exercises, exercises for relaxing the muscles, body massage, soothing music, aromatic therapy, yoga and traditional chinese exercises. The term implied exercise physical activity that involves deliberate movements and repeated, in order to strengthen and maintain bone strength, muscle strength and flexibility. The impact of physical activity dependent is proportional intensity and duration of physical activities. The mechanisms of action of this phenomenon are still unknown but assumed that their action is antilipemic control and assisted by several enzymes with effects on lipids metabolism. Context mechanism by which exercise influence in the regulation of lipid profile and apolipoproteins is most diverse and is very closely related to the activity of the enzyme Lipoprotein-Lipase (LPL) and transfer proteins (Pronk NP. 1993; Superko HR. 1995;). Are known facts that have athletes active for 25-30% higher value cholesterol HDL compared with individuals without physical activity (Kingwell BA., 1998) January verifiable evidence that after the first month after acute myocardial infarction in patients who have the suggestions by doctors for physical exercises (developed daily physical activity, exercise, walking, jogging up to 30 minutes, five days a week) is decrease concentrations of HDL-cholesterol subfraction growing-HDL<sub>2</sub> (Saku K., et al 1999) Physical activity increases the activity of LPL thus directly reduces the level of triglycerides and increases HDL-cholesterol. During lipolysis of VLDL triglycerides by fractions shall exempt: cholesterol, phospholipids and apoproteins transferred to cells of HDL-cholesterol nascent which treatment liver which increases the level of HDL in plasma kolesteriolit. Of adipose tissue and muscle ekstensor athletes athletics, wrestlers and those who have physical exercises overcrowded as a result of their high metabolism is verified extremely high activity of LPL. Effect physical exercise reduce high levels of triglycerides observed not only in excessive spending by VLDL fatty energy needs but also by reducing the excess of VLDL synthesis in the liver (Kwiterovich PO.: 1998; Miettinen T., 1991; Pejović M. 1987). numerous studies have proven that excessive activity and increased physical (the athletes) increases the level of antigen-hr Lecithin-Cholesterol-Acetyl-Transferase (LCAT) which faster transfer fats acids from lecithin to cholesterol di-rection during the formation of HDL-cholesterol. Intense physical work and the use of excessive increases the level apolipoprotein-E (Apo-E) which plays an important role in cholesterol

feedback carriage ( Gatto AM.: 1998 ). The level of HDL-ch increase in men and women who have used food to low caloric diet and physical activity have a minimum of 3-4 times a week from 30 minutes (for  $p < 0.001$ ) compared to the control group of individuals (males and females) who were not on the diet hipokaloric and have not had physical activity (21). In the first quarter we have verified the reduction of total cholesterol values (ChT), triglycerides (TG), and LDL-to HDL-ch have increased while of 15-19% and reduction aterogen report: Col / HDL-ch, and after 6 months, physical exercise 30 minutes every day for 6 days a week we decrease the values of total cholesterol, LDL-ch, TG, LDL-ch report directly via / HDL-ch, Kol.Tot / HDL-ch and increased HDL-ch medallim significant for  $p < 0.000$ . 1From important risk factors is the reduction of Body Mass Index (Body Mass Index), normalization of arterial pressure, reduced concentrations of fibirno-gen, lipoproteins (s), etc. homocystein. In primary and secondary prevention CD, attack the brain plays a role important increased physical activity. Physical activity with walking speed of 30-60 minutes three to four times a week is the minimum measure of physical aktiviteit cardio-vascular.Activity of dissease in preventing physical, more intense exercises concentrations of total cholesterol go down by 6-8% and LDL-ch of 7-14% and increased HDL-ch have 15-19% (Wood AJJ.1996. Schlierf G., 1995 ; Hsieh SD.1998 ).Recent years in the days of the week, so the boys perform more physical activity than girls.

## 6 CONCLUSION

In conclusion we can conclude from our work that people who are physically active and involved in sports Changing from minimum 30 minutes every day within 5-6 days of the week have a lower risk of very appearance of cardiovascular disease, HTA, ischemic disease heart failure, acute myocardial infarct, strokes, diabetitb tip 2, breast cancer, intestinal cancer, prostate cancer, osteoporosis and depression compared to physical inactive individuals. Survival of individuals involved in physical activity is longer compared with individuals who do not engage in physical activities. Physical activity not only in sports, but physical activity is any bodily movement produced by skeletal muscles that recone energy costs. So we propose and suggest that much more consciousness in the population increase awareness through media broadcasts, electronic, print, television special programs,

prevention of and risk CD athreosklerozis early appearance and atherosklrotic processes to coronary arteries, cerebral and peripheral role was given to determini-ng the concentracion apolipoproteieneve: Lp (a), Apo-A), Or -B100, Apo-C, Apo-E and their subfrakcion, who last year counted as a factor riscant presentation of coronary artery atheroscle-rotic processes, cerebral and peripheral severe consequences of myocardial infarction, cerebral stroke and trombembolic of trials Harper CR., 1999,Zeman M., et al.:1995). January verifiable evidence that hypercholesterolemia is one of The primary factors in the appearance of CD. In undim included moon and prefer to suggest that modification of food, the way of life adjustment accord, flavonide feeding, use of fish oil, intensive physical exercise (running, walking speed, tennis, football, voljeboll, basket-ball, gyms, etc.) remain as ways and preference on favorite to regulate and normalize the high values of fat (in cases of special combined with hipolipemic-*Statin drugs, Fbrates, Niacin, Holetsipol, Holestiramin*) and prevention of atherosclerosis and cardiovascular disease (CD Phofl M., et al.) Several studies have verified that the males and females have different habits and physical activi-ty that 18% of men commit for at least 30 minutes of physical activity on 5 or more days of the week and 11.9% for females perform at least 30 minutes of physical activity on 5 or more

panfletave on the role of exercise, sport appearance in preventing cardiovascular disease, ischemic heart disease, brain stroke cerebral and appeal to the relevant educational institutions continue to return to school to increase the number of hours of physical education in order to increase childhood have the right physiological spine of children and healthy development of physical, psychological and mental health of children and students. Physical activity includes sports, exercises and other activities as claimed are: games, walking, dancing, orchards, yoga, meditation, house-work, sking, swimming, voleboll, football, basketball tour, tennis ect. Intensity forms different physical activity varies by people. So the children and young people, develops tissue skeletal musculic healthy( bones, muscles and joints), developed a cardiovascular system healthy.

## Literature:

1. *Third Report of the National Cholesterol Education Program Expert Panel on the Detection, Evaluation and Treatment of High Blood Cholesterol in Adults.*2001.
2. Ellsworth, N., Haskell, W., Mackey, S., Sheehan, M., Stefanick, M. & Wood, P. 1998, "Effects of diet and exercise in men and postmenopausal women with low levels of HDL cholesterol and high levels of LDL cholesterol.", *New England Journal of Medicine*, vol. 339, pp. 12-8.
3. U.S. Department of Health and Human Services. 1996, *Physical activity and health: a report of the surgeon general.*, U.S. Department of Health and Human Services, Centers for Disease Control and
4. Lippincott., Williams. & Wilkins. 2006, *ACSM's guidelines for exercise testing and prescription.* 7th ed. edn, , Philadelphia.
5. Biggerstaff, K.D. & Wooten, J.S. 2008, "Hyperlipidemia and Dyslipidemia" in *Clinical Exercise Physiology*, eds. J.K. Ehrman, P.M. Gordon, P.S. Visich & S.J. Keteyian, 2nd edn, Human Kinetics, United States, pp. 247-264.
6. Ben-Ezra, V., Biggerstaff, K. & Wooten, J 2008, "Responses of LDL and HDL particle size and distribution to omega-3 fatty acid supplementation and aerobic exercise", *Journal of Applied Physiology*, vol. 107, pp. 794-800.

7. Duncan, J.J., Gordon, N.F. & Scott, C.B. 1991, "Women walking for health and fitness. How much is enough?", *Journal of the American Medical Association*, vol. 266, pp. 3295-3299.
8. Ebisu, T. 1995, "Splitting the distance of endurance running: on cardiovascular endurance and blood lipids", *Japan Journal of Physical Education*, vol. 30, pp. 37-43.
9. Biggerstaff, K.D. & Wooten, J.S. 2008, "Hyperlipidemia and Dyslipidemia" in *Clinical Exercise Physiology*, eds. J.K. Ehrman, P.M. Gordon, P.S. Visich & S.J. Keteyian, 2nd edn, Human Kinetics, United States, pp. 247-264.
10. Aagard, P., Bulow, J., Honstrup, T., Jakobsen, M., Ktustrup, P., Mohr, M., Nielson, J., Nybo, L., Randers, M., Simonse, L. & Sundstrup, E. 2010, "High-Intensity Training versus Traditional Exercise Interventions for Promoting Health", *Official Journal of the American College of Sports Medicine*, vol. 42, pp. 1951-1958.
11. Cable, N., Elliot, K. & Sale, C. 2002, "Effects of resistance training and detraining on muscle strength and blood lipid profiles in postmenopausal women", *British Journal of Sports Medicine*, vol. 36, pp. 340.
12. Wooten, J., Phillips, M., Mitchell, J., Patrizi, R., Pleasant, R. & Hein, R. 2011, "Resistance Exercise and Lipoproteins in Postmenopausal Women.", *International Journal of Sports Medicine*, vol. 32, pp. 7-6.
13. Lan, C., Su, T., Chen, S. & Lai, J. 2008, "Effect of T'ai Chi Chuan training on cardiovascular risk factors in dyslipidemic patients", *The Journal of Alternative and Complementary Medicine*, vol. 14, no. 7, pp. 813-819.

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