
Walking: A Good Cardio Exercise

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Abstract

Regular brisk walks offer many health benefits. Walking raises your “good” cholesterol and lowers your “bad” cholesterol. Often, these exercises can also help raise the levels of a person’s HDL cholesterol. By walking, you are helping your body learn to use oxygen more efficiently. You can see the results of this as you can walk farther and farther without feeling out of breath. Walking reduces many of the risk factors for cardiovascular disease. Recent studies have found that walking increases aerobic capacity, meaning that it helps your body use oxygen more efficiently. Walking has also been found to reduce systolic and diastolic blood pressure, as well as body fat percentage. All of these are risk factors for cardiovascular disease.

KEYWORDS: lipid profile, Walking, Exercise, Cardio disease

INTRODUCTION

From the initial stage of covid-19 we have been highly experienced with the term ‘co-morbidity’ where from we very aware about coronary diseases specially heart attack. It is well known fact that due to some specific reason like food habits, lack of exercises, work patterns, stress of demands, job pressure, daily changing needs and so on affected on person’s life tremendously, particularly people are affected on cardiovascular system and create problem like heart attack. Tragedy is that the early thirty people are suffering from coronary diseases and getting heart attack in alarming rate, some time mild and some time severe. Lots of cases were reported with massive attack and death. If we go through the history before covid-19, we can find many cases were there. After covid-19, the coronary disease cases have been increased by 10%-20% reported by many doctors in India. During the pandemic covid-19, a huge number of co-morbidity cases have been reported in which the heart failure cases were found more. This study tries to highlight the Control and maintain the normal status of cholesterol (lipid profile) through proper exercises and the relationship between changing status in lipid profile and heart attack.

Cholesterol is a fatty and waxy substance present in blood and playing a crucial role in many life activity like as hormone synthesis, vitamin D absorption, digestion and many more important life activities. Cholesterol present in blood stream with a number of group like as HDL or High-Density Lipoprotein Cholesterol (the “good cholesterol”), LDL or Low-Density Lipoprotein Cholesterol (the “bad” cholesterol), VLDL Or Very Low-Density Lipoprotein Cholesterol and Triglycerides. Body maintains balance cholesterol to smoothly function the life activities. The above mention reasons like food habits, lack of exercises, work patterns, stress of demands, job pressure, daily changing needs and so on may cause the imbalance of total cholesterol profile and creates problem particularly in blood vessels and heart. if the profile gets change in its normal nature then we have to be careful immediately and try to bring it in normal nature otherwise it will give big blow to the circulatory parts as well as other important organs and lead us to life problems, some time death. Without the help of other methods, only one thing can maintain its normal status that is regular exercises. We the authors discuss the importance and methods of applying exercises later part of this paper.

WHAT IS A LIPID PROFILE?

A lipid profile is a combination of blood tests performed to check the cholesterol levels and the level of triglycerides in the blood. These are nothing but fat content present in your bloodstream. Unhealthy levels of lipids can clog your arteries and increase your risk of heart disease and stroke. These are also responsible for unhealthy weight gain.

WHAT INFORMATION DOES A LIPID PROFILE GIVE?

Cholesterol is a fat-soluble substance that is carried in the blood by means of distinct transporters referred to as lipoproteins. Lipoproteins are a fundamental phase of the complicated transport machine that exchanges lipids amongst the liver, the intestine, and peripheral tissues. The unique sorts of lipoproteins are categorized primarily based on the thickness of the protein cell that surrounds the cholesterol. Four foremost instructions of lipoproteins have been categorized: chylomicron, derived from the intestinal absorption of triglycerides; very low density lipoprotein (VLDL), made in the liver for the transport of triglycerides; low-density lipoprotein (LDL), a product of VLDL metabolism and the essential transporters of cholesterol; and high-density lipoprotein (HDL), worried in the reverse transport of LDL cholesterol to the liver (Durstine & Haskell, 1994).

As mentioned before, the lipid profile provides valuable information on the levels of cholesterol present in the blood. It actually sheds light on these specific parameters that make up you complete cholesterol count:

HDL – C or High-Density Lipoprotein Cholesterol (the “good cholesterol”)

LDL – C or Low-Density Lipoprotein Cholesterol (the “bad” cholesterol)

LDL to HDL ratio

VLDL-C Or Very Low-Density Lipoprotein Cholesterol

Triglycerides

Total cholesterol

WHO WILL NEED TO DO THIS TEST

1. In normal situation, people who above the age of 40 years for men and 45 years for women are advise to check the lipid profile once in a year.
2. Suffering from breathing problem
3. Have a pre-existing health condition such as hypertension, diabetes, heart problem
4. Family history of heart attack
5. Obesity and over weight
6. Excess fatigue and tiredness
7. Smoker
8. No regular physical work

CURRENT OBSERVATION ON AN INDIAN INCREASED CHOLESTEROL LEVEL AND RISK OF HEART ATTACK.

As per the latest statistics, every 33 seconds one person dies due to a heart attack in India. It has been observed that with every 40 point increase in cholesterol levels, the risk death by heart attack (in young demography) increases by 200%. Currently, almost 75% of Indians have unhealthy cholesterol levels and roughly 72% have low levels of healthy cholesterol.

SIGN AND SYMPTOMS:

The tentative sign and symptoms will be seen when the normal lipid profile will get change and tentative to be presence with poor functioning, the sign and symptoms are following...

Breathing problem, heartburn, nausea and vomiting, high blood pressure, unexplained sweating, general malaise and weakness, upper abdomen pain and discomfort upper back and arm pain etc.

If the above one sign or symptom will appear in your sense you have to careful and consult with doctor.

WHAT DOES A NORMAL (HEALTHY) LIPID PROFILE LOOK LIKE?

Cholesterol levels are measured in the unit mg/dL. The following are the normal ranges of different cholesterol component present in the blood (for adults).

Cholesterol Component	Normal	Borderline	Unhealthy
Total serum cholesterol	< 200mg/dL	200-239 mg/dL	>240 mg/dL
HDL	> 60 mg/dL	50-60 mg/dL	<40 mg/dL

LDL	<100 mg/dL	130-159 mg/dL	160-189 mg/dL
Triglycerides	< 150 mg/dL	150-199 mg/dL	200-499 mg/dL
VLDL	5-40mg/dL	40- 49 mg/dL	>50 mg/dL
Total cholesterol: HDL	4:1 (optimal)	4:1 – 5:1	>5:1

ANALYSIS OF THE LIPID PROFILE

In all the below cases, except HDL, the lower the value of the reading is the better.

1. Total cholesterol above 240 mg/ dL doubles the threat of a heart attack.
2. Still, it's considered near- optimal, If you have LDL reading in the range 100- 129 mg/dL. still, you must keep your cholesterol count in check and get this test done regularly.
3. In the case of HDL, having a advanced number indicates a healthier factor. HDL is the good cholesterol and it helps in flushing out LDL cholesterol from the body. However, it increases your threat of a heart attack, if you have HDL count< 40 mg/ dL.

ROLE OF EXERCISE ON HEALTHY CHOLESTEROL LEVEL

The hyperlink between LDL cholesterol and coronary heart disorder (CHD) has been grown up via long-term research of excessive tiers of blood LDL cholesterol and the incidence of CHD. High-density lipoprotein LDL cholesterol (HDL-C) degrees are inversely and independently related with decreased threat of CHD (Neiman 1998). The danger of CHD will increase by using 2% to 3% for each 1.0 mg/dl reduce in HDL-C (Durstine & Haskell 1994). It is nicely build up that a sedentary life-style contributes drastically to the improvement of CHD and that bodily recreation performs unnecessary role in lowering CHD mortality. Exercises has been related with extended concentrations of HDL-C, however, the quantity of exercising crucial to considerably increase HDL-C stages has no longer been identified. Research in this vicinity has furnished inconsistent results, however has counseled that there may also be a workout threshold that have to be met earlier than enormous modifications in HDL-C are observed. Furthermore, a dose-response relationship between the quantity of workout carried out and HDL-C has been advised (Drygas et al. 2000).

The function of LDL-cholesterol (LDL-C), on occasion referred to as the “bad” or “dreadful” cholesterol, is to transport LDLcholesterol to a number of physique cells and credit score extra LDL cholesterol in the artery walls, growing the danger of coronary heart disease. LDL-C is a VLDL molecule with most of the triglyceride eliminated and nearly all of the LDL cholesterol remaining. A applicable stage of LDL-C is under one hundred thirty mg/dl, with an best stage of a hundred mg/dl or less.

HDL-cholesterol (HDL-C), once in a while known as the “good” or “healthy” cholesterol, is accountable for the transport of LDL cholesterol from the blood and artery partitions to the liver the place it is transformed to bile to be used for digestion or disposed of through the body. This “reverse LDL cholesterol transport process” is believed to be beneficial in stopping or reversing coronary heart disease. HDL molecules have two

predominant subclasses: HDL2 and HDL3 (Durstine & Haskell, 1994). The HDL3 molecule is synthesized in the liver and put into circulation to acquire cholesterol. As the HDL3 molecule will increase its LDL cholesterol content, it will become much less dense and is categorized as HDL2. HDL2 is then recycled in the liver and HDL3 is once more launched into circulation (Durstine & Haskell, 1994). When HDL-C stages are above 60 mg/dl the danger of coronary heart ailment is decreased. It is regarded undesirable for HDL-C stages limit beneath 35 mg/dl.

The Physical Activity Guidelines Advisory Committee Report highlighted the want to sketch a program that will supply terrific workout in order to gain maximal gain at the lowest degree of risk. However, no matter a massive range of associated publications, a complete overview of most effective modes, intensities and frequencies of bodily recreation in the context of the lipid profile is but to be posted by means of any of the organizations involved. A current evaluate by means of the European Society of Cardiology (ESC) quickly summarized the short- and long-term consequences of cardio workout and resistance training in normolipidaemic topics and hyperlipidaemic patients. The ESC concluded that it has no longer but been set up how lots exercising is required in order to enhance the lipid profile and minimize cardiovascular risk.

RECOMMENDATION OF EXERCISES FOR CONTROL OR STABLE CHOLESTEROL LEVEL AND FOR GOOD HEART HEALTH

Walking is the best easiest and fundamental movement exercise for us, it very easy to perform in any place under any environment. For improving and maintaining health we can use this exercises pattern easily, it can help us to build-up stamina, burn extra calories and make our cardiovascular system healthier.

World Health Organization has recommended for all to do exercises at least 150 minutes to a maximum 300 minutes in a week through walking or jogging or running or cycling etc. for walking exercise we recommend a 180 minutes in a week by 20000 to 21000 steps or 15 to 16 km walk within 180 minutes will achieve the target and it is good for maintain heart as well as stable cholesterol level. Here is a suitable example of walking patterns to achieve the 150 heart points in a week according to Google fit application which is similar to WHO recommended exercises for 180 minutes walking.

Number of days	Steps	Time in minutes	Remarks
2	10000	90	Total 20000 steps in 180 minutes in a week
3	7000	60	Total 21000 steps in 180 minutes in a week (1000 steps may ignore).
4	5000	45	Total 20000 steps in 180 minutes in a week
5	4000	36	Total 20000 steps in 180 minutes in a week
6	3500	30	Total 21000 steps in 180 minutes in a week (1000 steps may ignore).

A good example from the Times of India which was published on November 28th, 2019 that a 29 years old lady who gaining overweight with 72 kg and her height were 5.3", she attempted to control and reduce her body weight through walking. She used to walk every day for an hour after continuous walk for 8 months she reduce 15 kg weight. Beside she took a balance diet. We can say from this evidence that by regular walking we can maintain good health condition as well as reduce excess body weight.

CONCLUSION

No doubt about regular exercises, if we want to enjoy our life in our way then we have to spend at least half an hour per day in the play field with some moderate exercises or brisk walk.

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