



Atherosclerosis and Physical Activities

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Abstract

Atherosclerosis also called atherosclerotic cardiovascular diseases, It is the diseases of the artery characterized by the deposition of fatty material on their inner walls. It results hardening and narrowing of the arteries. Life depends on the proper delivery of oxygen and nutrition at the cellular level. While the heart problems are detected, the underlying cause is usually quite advanced, having progressed for decades. There is, therefore, advised on preventing atherosclerosis by modifying risk factors, such as exercise, healthy eating and avoidance of smoking and medication if necessary. Exercise done regularly, helps to promote health and steers to clear the entire stretch of the arterial highway to the human physique.

Keywords: Atherosclerosis, Physical Activities, cardiovascular diseases.

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Introduction

Atherosclerosis also called atherosclerotic cardiovascular diseases, It is the diseases of the artery characterized by the deposition of fatty material on their inner walls. It results hardening and narrowing of the arteries. It is a chronic inflammatory response in the walls of arteries, in large part due to the accumulation of macrophage white blood cells and promoted by low density lipoproteins. This progressive process silently and slowly blocks arteries, putting blood flow at risk and may be leading cause of heart attack. Cardiac heart diseases strikes Indians four times more than any other race in the world. It refers to the class of diseases that involve the heart or blood vessels (arteries and veins). It is usually used to refer to those related to atherosclerosis. Atherosclerosis causes two main problems. Firstly the atheromatous plaques, though long compensated for by artery enlargement, eventually leads to plaque ruptures and narrowing of the artery and therefore, there is an insufficient blood supply to the organ it feeds. Secondly, if the compensating artery enlargement process is excessive, then a net aneurysm (a balloon like swelling in the artery) is the result. These complications are chronic, slowly progressing and cumulative. Most commonly, soft plaques suddenly ruptures, causing the formation of a thrombus fed by the artery in approximately 5mins. This catastrophic event is called an infraction. One of the most common recognized scenarios is called coronary thrombosis of coronary artery, causing myocardial infraction (cardiac arrest). Another common scenario in

very advanced diseases is claudicating (cramping pain) from insufficient blood supply to the legs, typically due to a combination of both stenosis (abnormal narrowing of passage) and aneurismal (a balloon like swelling in the artery) segments narrowed with clots. Atherosclerosis is body wide process and similar events occur elsewhere in the body.

Causes

- Sedentary life
- Hereditary factors
- Obesity
- Diabetes
- High cholesterol
- Saturated fat etc.

Atherosclerosis typically begins in early adolescence, and is usually found in most major arteries, and is not detected by most diagnostic methods during life. Atherosclerosis and coronary heart diseases blunted by a lifestyle incorporating moderate level of physical activity. Using increased physical activity as a preventive measure, both primary and secondary, is also advantages over therapies targeting isolated lesions. Acute coronary syndromes and sudden death are most often associated with rupture of complex, vulnerable plaques that are otherwise clinically benign. Many patients with unstable CHD have multiple vulnerable plaques. Thus systematic therapies, such as exercise, which simultaneously treat all existing lesions rather than focal strategies that treat only one target lesion. The independence of physical inactivity as a risk factor for CHD is supported by meta analysis demonstrating that only 35% of the beneficial effect of exercise on CHD can be attributed to favorable changes in known risk factors, such as lipid, cholesterol, hyper tension etc. Exercise induced improvements in vessel wall function and structure represent a vascular

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conditioning effect, which provides a plausible mechanistic explanation for the cardio protective benefits of exercise, independent impact of exercise on traditional CV risk factors. Equally plausible is the contribution of nonvascular adaptations, such as improved ischemic tolerance of the myocardium and or reduced thrombogenicity, emphasizing the necessity of a more global approach to the question of improved CHD outcome by physical activity.

Exercise Regularly

The simplest and surest way to success is regular physical activity .it helps the heart muscle nurture the growth of new blood vessels in a natural way to bypass cholesterol clogged coronary artery. Walking, jogging, running, swimming, cycling and any form of continues and sustained activity that makes the heart achieve the targeted intensity level is desirable. It is advisable to wear a heart rate monitor or stick to age predicted heart rate method, to have a clear-cut idea about the intensity of the activity. Physical activity or exercise is the best way to protect the heart and prevent

heart diseases .An aerobic activity for at least 30minutes duration a day is reasonably healthy target. The duration is as important as its intensity. Life depends on the proper delivery of oxygen and nutrition at the cellular level. While the heart problems are detected, the underlying cause is usually quite advanced, having progressed for decades. There is, therefore, advised on preventing atherosclerosis by modifying risk factors, such as exercise, healthy eating and avoidance of smoking and medication if necessary. Exercise done regularly, helps to promote health and steers to clear the entire stretch of the arterial highway to the human physique.

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