

Role of Exercise in Cardiovascular Fitness

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Abstract

Regular exercise offers an even more effective approach to put a stop to the increasing number of people suffering from heart diseases. The lungs, heart, and circulatory system are also the focal points in health and fitness. The reason for this is to improve stamina, immune system, and maintain good body composition. Cardiovascular fitness, the activity components included are not only for muscular development and endurance training. The lungs, heart, and circulatory system are also the focal points in health and fitness. Poor physical fitness may result from various diseases, especially when accompanied by prolonged recumbence, or from inactivity such as a sedentary lifestyle and a low- level of physical activity. Increased amount of daily exercise, on the other hand, is associated with a decreased incidence of blood pressure.

Introduction

The cardiovascular system consists of the heart and blood vessels. Cardiovascular fitness reduces the risk of cardiovascular diseases and other diseases like hypertension, Diabetes obesity, and may cure respiratory problems like asthma (Amusa, & Goon , 2011). Modern lifestyle has a lack of movement and physical activity due the shrinking availability of space, the loss of family time, and preoccupation with media, among other reasons. It is imperative that children - as well adults - move more every day. Many of the megacities of the world cannot supply growing numbers of inhabitants, particularly children, with low cost sports training and fitness facilities. Low level physical Fitness contributes to the early onset and progression of life style disease such as cardiovascular disease, hypertension, diabetes and obesity. Cardiovascular diseases have behavioural correlates and that physical inactivity is related to cardiovascular disease. Low cardiovascular fitness may result in high physical strain on the body .For cardiovascular fitness, the activity components included are not only for muscular development and endurance training.

Athletic heart

Athlete's heart is a result of dynamic physical activity, such as aerobic training more than 5 hours a week rather than static training such as

weightlifting. During intensive prolonged endurance or strength training, the body signals the heart to pump more blood through the body to counteract the oxygen deficit building in the skeletal muscles. Enlargement of the heart is a natural physical adaptation of the body to deal with the high pressures and large amounts of blood that can affect the heart during these periods of time. The athlete's heart is associated with physiological remodelling as a consequence of repetitive cardiac loading. Athlete's heart is common in athletes who routinely exercise more than an hour a day, and occurs primarily in endurance athletes, though it can occasionally arise in heavy weight trainers. **Athletic heart** is a non-pathological condition commonly seen in sports medicine in which the human heart is enlarged, and the resting heart rate is lower than normal. The condition is generally considered benign, but may occasionally hide a serious medical condition, or may even be mistaken for one. Heart size increases due to exercise and the strength training causes increase in the thickness of ventricle walls thereby increasing the efficiency of heart. The heart becomes enlarged, or hypertrophic, due to intense cardiovascular workouts, creating an increase in stroke volume, an enlarged left ventricle (and right ventricle), and a decrease in resting pulse along with irregular rhythms.

Role of exercise in cardiovascular fitness

The health benefit of exercise with regard to weight loss is that it's easier to stop eating when your mind-body connection is strong. It's your body awareness that is improving, not necessarily the caloric burn. Regular exercise improves mindfulness and encourages a "gentle strength", which positively affects weight loss and weight management. The importance of cardiovascular fitness to health for all individuals has been well documented. Physical fitness is a required element for all the activities in our life. Cardiovascular fitness of an individual is mainly dependent on lifestyle related factors such as daily physical activity levels. It was believed that the low cardiovascular fitness level of an individual is associated with higher mortality rate. (Jourkhesht et.al.2012). Physical fitness has been shown to decrease the risk of cardiovascular disease and improve total cholesterol and high density lipoprotein levels (Miles et. al. 1976). Exercise also means total caloric expenditure promotes fat loss, and increases lean body mass (Maynard 1991). **Vasodilation** is the widening of blood vessels. It results from relaxation of smooth muscle cells within the vessel walls, in particular in the large veins, large arteries, and smaller arterioles. The cardiovascular system is responsible for pumping blood throughout the body thereby providing a rapid-transport system to distribute oxygen to the body cells and also remove carbon dioxide from the body with other waste products. Arteries in your working muscles dilate to accommodate their increased need for blood. At the same time, the heart's increased output causes your blood pressure to rise. Arterioles (tiny arteries) in your skin expand, allowing for more blood flow there. As you continue to exercise, blood vessels **is widening**.

Obesity is one of causes of cardiovascular disease. Regular exercise 45 minutes daily was connected to weight loss in subjects between the ages of 45 and 55, according to a study funded by the National Cancer Institute. Aerobic exercise isn't about burning calories; it's more about becoming more aware of your body and when it's full of food, stress, or conversation.

In addition Cardiac output : The amount of blood the heart pumps through the circulatory system in a minute. The amount of blood put out by the left ventricle of the heart in one contraction is called the stroke volume. The stroke volume and the heart rate determine the **cardiac output**. Blood pressure control due to exercise as the requirement of blood by the muscles is increased. The pressure exerted on the walls of the blood vessels increases as the heart pumps more and more blood to meet the requirement of muscles.

Conclusions

Regular exercise has improved the cardiovascular system, decreased some of the risk factors leading to a cardiovascular disease, promoted fat loss, increased muscle mass, increased glucose intake by cells and enhanced well-being of the sedentary students. Physical fitness was noted to improve cardiovascular fitness and work capacity, while decreasing resting and exercise blood pressure, as well as peripheral vascular resistance. Finally, physical fitness has been shown to decrease the risk of cardiovascular disease and improve total cholesterol and high density lipoprotein levels

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