

# Physical Activity and Cardiovascular Health



Over the past 25 years, the United States has experienced a steady decline in the number of deaths from cardiovascular disease (CVD), primarily in mortality caused by coronary heart disease and stroke. Still, coronary heart disease is the leading cause of death while stroke is third. Lifestyle improvements by the American public and better control of the risk factors for heart disease and stroke have been big reason for this decline.

Exercising 30 minutes a day can help you lose weight, which can lower blood pressure

Coronary heart disease and stroke have many causes. Modifiable risk factors include smoking, high blood pressure, blood lipid levels, obesity, diabetes, and physical inactivity. National trends observed with smoking, high blood pressure, and high blood cholesterol have improved, but obesity and physical inactivity have not. Advanced technologies have taken the place of physical activity in many daily tasks. Unfortunately, most Americans are physical inactive.

Physical activity protects against the development of CVD and also improves other CVD risk factors, including high blood pressure, blood lipid levels, insulin resistance, and obesity. Physical activity is also important in the treatment and management of patients with CVD or increased risk, including those who have hypertension, stable angina, a prior myocardial infarction, peripheral vascular disease, or heart failure. Physical activity is important for cardiac rehabilitation, and people with CVD may benefit from it.

## Advantages to an Active Lifestyle

Physical inactivity among the U.S. population is now widespread. About one in four adults (more women than men) currently have sedentary lifestyles with no leisure time physical activity. An additional one-third of adults are insufficiently active to achieve health benefits. The prevalence of inactivity varies by gender, age, ethnicity, health status, and geographic region but is common to all demographic groups.

Girls become less active than boys as they grow older. Children become far less active as they move through adolescence. Obesity is increasing among children. It is related to an energy imbalance (i.e., calories consumed in excess of calorie expenditure.) Data indicate that obese children and adolescents have a high risk of becoming obese adults, and obesity in adulthood is related to coronary artery disease, hypertension, and diabetes. Thus, the prevention of childhood obesity has the potential of preventing CVD in adults.

There is evidence that increased physical activity leads to weight loss and that combining physical activity with reducing food intake can increase and help to maintain loss of body weight and body fat mass.

Middle-aged and older men and women who engage in regular physical activity have significantly higher high-density lipoprotein (HDL) cholesterol levels than do those who are sedentary. When exercise training has extended to at least 12 weeks, the HDL cholesterol levels are even more improved.

### **What Type, Intensity, and Quantity of Exercise Are Best?**

You don't need a structured or vigorous exercise program to reduce CVD risk factors and gain many other health benefits. Most benefits of physical activity can be gained by performing moderately intense activities.

Everyone should maintain regular physical activity at a level appropriate to his or her abilities and interests. Both children and adults should have at least 30 minutes or more of moderate-intensity physical activity on at least five, if not all days of the week. However, physical activity must be performed regularly to maintain positive effects. Intermittent or shorter bouts of activity (at least 10 minutes), including tasks of daily living, also have similar cardiovascular and health benefits if performed at a level of moderate intensity (such as brisk walking, cycling, vacuuming, and yard work) for a total of 30 minutes daily. People who currently meet the recommended minimal standards may gain additional health and fitness benefits from increasing their activity. Higher intensity or longer duration activity could be performed approximately three times weekly and achieve cardiovascular benefits, but low-intensity or shorter duration activities should be performed more often to achieve cardiovascular benefits.

People who are not currently active should gradually build up to the recommended goal of 30 minutes of moderate activity daily by adding a few minutes each day until reaching their personal goal to reduce the risk of injury.

Developing muscular strength and joint flexibility is also important for an overall activity program to improve one's ability to perform tasks and to reduce the potential for injury. Resistance training may contribute to better balance, coordination, and agility that may help prevent falls in the elderly.

Physical activity carries risks as well as benefits. The most common adverse effects of activity relate to musculoskeletal injury and are usually mild and self-limited. The risk of injury increases with increased intensity, frequency, and duration of activity and also depends on the type of activity. Exercising in moderation can reduce these injuries.

Because the risks of physical activity are very low compared with the health benefits, most adults do not need medical consultation before starting a moderate-intensity physical activity program. However, those with known CVD and men over age 40 and women over age 50 with multiple cardiovascular risk factors should have a medical evaluation prior to initiating such a program.