

Prevention of cardiovascular disease should begin in childhood

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Atherosclerotic cardiovascular diseases are major cause of death in the world. It is essential to prevent the development of risk factors for cardiovascular disease (primordial prevention) and modification of them once they are established (primary prevention).

The debilitating and often fatal complications of cardiovascular disease (CVD) are usually seen in middle-aged or elderly men and women. However, atherosclerosis – the main pathological process leading to coronary artery disease, cerebral artery disease and peripheral artery disease – begins early in life and progresses gradually through adolescence and early adulthood.

A large study has reported presence of advanced atherosclerosis in adolescents. Risk factors and risk behaviors that increase CVD begin in childhood. CVD risk reduction delays progression of CVD. Timing is critical in childhood and adolescence. This is critical, because this timing determines, at least in part, when interventions should occur. Many adult health problems (e.g. obesity, hypertension) have their early origins in childhood, because this is the time when lifestyles are formed. Primordial prevention begins in childhood when health risk behavior begins. Parents, teachers, and peer groups are important in imparting health education to children. Primordial prevention of cardiovascular disease will provide great value in developing a healthier, more productive society.

You may have heard the adage: "An ounce of prevention is worth a pound of cure." It is sage advice when it comes to heart disease. By teaching your kids to follow a healthy lifestyle, you can help reduce their risk for heart disease later in life. Although children and teens usually do not show the symptoms of heart disease, the silent buildup of plaque (fatty deposits) can start in childhood and can have a serious impact on their adult life.

"The kinds of heart problems which relate to the problems adults have don't really manifest themselves until [the children are] much older. But the seeds of

those problems are sown in childhood and adolescence." Those "seeds" include obesity, diabetes, a sedentary lifestyle, smoking, and high blood pressure. Fortunately, parents can influence their children's behavior by encouraging healthy eating and regular aerobic exercise, as well as discouraging smoking. A child born today is 500 times more likely to die of acquired atherosclerosis (the formation of plaque on artery walls) than of congenital heart disease, "It is very important for kids to grow up with the understanding that they are in large measure responsible for their health,"

Healthy food, healthy hearts

A balanced diet is essential for children and adolescents. "As a matter of pediatric care, we discuss the importance of a balanced diet high in fiber and low in fat," It is also important for kids not to overdo snacking between meals, he adds.

The U.S. Department of Agriculture's dietary guidelines for Americans recommend a total fat intake of 25 to 35 percent for children ages 4 to 18 years. A fat intake of 30 to 35 percent of calories is recommended for children ages 2 to 3 years.

You can help prevent obesity in your kids by encouraging them to be active in school and at home. Give them time to play each day outdoors. The USDA's guidelines recommend 60 minutes of moderate to vigorous activity for children most days of the week. Limit their sedentary activities: Set time limits for TV watching, computer use (other than for homework) and handheld computer games. Set a good example yourself by making exercise part of your life.

Genetics and family history—including a family history of early heart attack—can also play a role. "Obtaining a good family history is very important," "When we see a heavy child come into the clinic and both of his parents are obese, we know the task before us is especially difficult."

The risk factors

Risk factors in childhood and adolescence that have a direct relationship on the probability of having cardiac disease later in life include obesity, an inactive lifestyle, smoking, high blood pressure, and high cholesterol

"The National Cholesterol Education Program recommends performing selective screening in children whose first- or second-degree family members have had evidence of coronary artery disease below the age of 55 or for children whose parents are known to have high cholesterol or triglyceride levels, even if they have not yet developed coronary artery problems," Parents must show by example, she adds. Family activities that involve movement—such as strolls and bike rides—are better for everyone. Smoking among teenagers is also a concern. "There is recent data that show a slight upward trend in smoking among high school kids, and that is, of course, a terrible problem. It is not only because of the addictive nature of tobacco, but also because smoking carries with it an extremely high likelihood of heart disease, lung disease and colon cancer.

A guide to healthy, happy children

The American Heart Association (AHA) and the USDA offer some exercise guidelines for children ages 5 and older:

- Provide at least 30 minutes of enjoyable, moderate-intensity activities every day.
- Provide a total of at least 60 minutes of vigorous physical activities most days a week to maintain heart and lung fitness.
- As an alternative to 60 minutes of activity, provide two 30-minute or three 20-minute periods of activity appropriate for the age, gender, and development of your child.
- Set strict limits for TV watching, computer use and play with handheld computer games.
- Do not use food as a reward for your children's accomplishments; instead, plan a physical activity that they will enjoy.
- During the summer, sign your children up for a sports camp or other camp that focuses on physical activity to keep your kids moving during the summer.

Dietary guidelines for children ages 2 and over:

- Total fat should be no more than 30 percent of total daily calories.
- Saturated fat should be no more than 10 percent of total daily calories.
- Dietary cholesterol should be less than 300 mg per day.
- Use the "age + 5" guideline for calculating the appropriate amount of fiber. Using the formula, a 7-year-old should eat 12 grams of fiber (7+5=12). When their daily calorie intake reaches 1,500 or more, increase fiber to 25 grams.
- Children also should eat at least five servings of fruits and vegetables each day and other foods low in saturated fat and cholesterol.