First signs of atherosclerotic heart disease may appear in early childhood
Loyola University Health System
February 1, 2012

When we think about people with heart disease we usually think about middle-aged men. In reality, atherosclerotic heart disease is the leading cause of death for men and women in North America, but its impact starts much earlier than adulthood. Though children will rarely, if ever, have overt symptoms of atherosclerosis, the first signs of this disease appear in early childhood and perhaps even before birth.

"Several decades ago studies gave us some early clues that atherosclerosis probably begins well before adulthood. Now, this evidence is indisputable, leaving no doubt about when we need to start meaningful preventive measures - measures that begin during childhood and continue life-long," said Joel Hardin, MD, director of Pediatric Cardiology at Loyola University Health System and associate professor of Pediatrics and Medicine at Loyola University Chicago Stritch School of Medicine.

According to Hardin, childhood risk factors for atherosclerosis are similar to those in adults:

- Elevated cholesterol
- Diabetes
- Hypertension
- Passive exposure to cigarette smoke
- Poor exercise habits
- Obesity
- Family history of early onset cardiovascular disease in parents, grandparents and aunts/uncles.

"Though children with these factors are at a greater risk of developing heart disease, research has shown that screening all children for cardiovascular disease can have an even greater benefit - and not just for the child. When a child is discovered to have a high cholesterol level, for example, doctors may recommend screening the child's older relatives who may be closer to having symptoms from atherosclerosis," said Hardin.

Recently, the American Academy of Pediatrics released new guidelines for pediatricians related to screening children and adolescents for cardiovascular disease. These include taking a child's blood pressure and assessing a patient's risk factors from birth onward. Under these new guidelines, for example, all children ages 9 to 11 years should undergo testing for elevated cholesterol, regardless of whether anyone in their family is known to have cardiovascular disease.

"This is one disease we can help stop before symptoms even start. Even if a child is diagnosed with a serious lipid disorder, medications used by adults for decades have now been proven to be safe and effective for children as young as 9 or 10," said Hardin. "If we catch it early and start treating the disease effectively, we can virtually restore normal life expectancy."

Though screening and support from a child's physician is important, according to Hardin, parental involvement and modeling are key to a child's heart health.

"How do children learn to walk, learn to talk? By watching and modeling what they see people around them doing. It's the same with habits, they learn from their parents," said Hardin
He suggests parents eat a heart-healthy diet, rich in fruits and vegetables, poultry and fish, use smaller portion sizes and minimize salt and sugar intake. He also recommends coming together as a family to eat meals at the table, not in front of the TV.

"If everyone is together at the table, eating the same thing it's healthier all around. It good modeling for the kids and healthier for the parents," said Hardin.

Hardin also suggests parents establish and model good physical exercise habits and limit screen time from an early age.

"Do things together as a family. Instead of sitting in front of the TV go for a walk together and ask your kids about their day. Find a game that makes you get up and move. Kids should have at least one hour of exercise per day, hopefully with you," said Hardin.

He also says that TVs should probably stay in the living room and not in a child's bedroom, and to limit all screen time, including computer time, to no more than 2 hours a day.

"The one thing we can't yet control is the genetic traits we inherit from our parents, but even if heart disease runs in the family there are still things you can do to limit its impact. Instilling good lifestyle habits can make a child's and adult's life healthier and longer. You're never too young or too old to make changes," said Hardin.