

Childhood Obesity and Heart Disease

More and more children enter the "obese" category every year, and the health consequences of the eating habits that cause children to become obese are more and more alarming.

A new study recently presented at the American Heart Association conference in New Orleans concluded that children who are obese or have high cholesterol show early warning signs of heart disease. The thickness of the artery walls of the children in the study resembled the thickness of artery walls of an average 45-year-old.

The lead author of the study was Dr. Geetha Raghuvver, a cardiologist and associate professor of pediatrics at the University of Missouri Kansas City School of Medicine. This unpublished study involved 70 children, ages 6 to 19. An ultrasound method called carotid artery intima-media thickness or CIMT was used in the study, which measured the thickness of the inner walls of the carotid arteries located in the neck. The carotid artery was used because it is easier to capture images of neck arteries than the coronary arteries connected directly to the heart. Increased thickness in the carotid artery wall indicates greater amounts of fatty plaque in the arteries leading to the heart and brain. Although these plaques are not usually the ones that rupture and lead to heart attack or stroke, they are indicative of plaques in the miles of blood vessels throughout the rest of the body that do tend to rupture.

The Kansas City study involved patients at Dr. Raghuvver's cardiology clinic at Children's Mercy hospital. Of the 34 boys and 36 girls, 40 were obese and 30 were not considered obese, but had high levels of LDL. Most of the patients had high levels of triglycerides. The average age was 13 and average weight was 140 pounds. Researchers found that 52 of the 70 patients had a maximum CIMT of at least .5 millimeters. This thickness alarmingly corresponds with the CIMT of an average 45-year-old adult. Dr. Raghuvver refers to this as a "vascular age" of 45.

The Kansas City Study was one of several presented at the conference that looked at the link between childhood obesity and heart disease. A study of 991 Australian children ages 5 to 15 found that children who were obese had greater enlargement of their hearts. Another Australian study was conducted on 150 10-year-olds with high body-mass index. It found that in the heart pumping process, the left ventricles were slower to untwist.

A study which further linked childhood obesity and heart disease was

published in *The New England Journal of Medicine*. It analyzed the records of 276,835 Danes who were examined as children in 1930. Researchers from Denmark found that the higher the child's body-mass index in 1930, the greater the chances were that they would develop heart disease.

Physicians have been warning for years that childhood obesity and its accompanying health issues would eventually result in cardiovascular disease becoming a disease of children. This led to a well-meaning but seriously misguided recommendation last year to test children for cholesterol levels at the age of 8 and to place them on statin drugs if needed. A better recommendation would have been to teach doctors how to have serious and meaningful conversations with parents about how to change their children's eating habits in order to reverse coronary artery disease.

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Belluck, Pam, "Child Obesity Seen as Warning of Heart Disease" New York Times, November 12 2009