

Study finds early signs of heart trouble in obese youth

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A study that used two-dimensional echocardiography to closely examine the hearts of 100 children and teens found physical and functional signs of future heart problems already developing in obese children.

In the study, published online today in the *Journal of the American College of Cardiology*, researchers from the University of Leipzig Heart Center in Leipzig, Germany, performed the echocardiograms on 61 obese children and 40 non-obese children ages 9 to 16. The two-dimensional echocardiogram uses ultrasound to provide cross sectional images of the beating heart as well as an assessment of blood flow through the valves and chambers of the heart. Researchers also conducted extensive blood chemistry analysis.

Researchers observed unique changes in the shape and function in the hearts of the obese children compared to the non-obese children in the study. In addition, obese [children](#) had significantly higher blood pressure and higher levels of LDL cholesterol, known as "bad" cholesterol, while HDL cholesterol, "good" cholesterol, was significantly lower. As a group, [obese children](#) also had a reduction in diastolic function, enlarged heart chambers signs of increased cardiac workload, and other unfavorable conditions.

"Children are ideal subjects to observe the effect of obesity on the heart," said the study's lead author Norman Mangner, M.D., of the Heart Center Leipzig. "This is because they are likely free of clinically relevant cardiovascular disease adults may suffer from."

Manger said additional studies are needed to determine if these changes are reversible with weight loss, and to determine the predictive value of these early cardiovascular changes.

Provided by American College of Cardiology

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