

## Link between obesity and enlarged heart discovered

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New research from The University of Arizona Sarver Heart Center helps explain why excessive body weight increases the risk for heart disease.

In the largest study of its kind, cardiologist M. Reza Movahed, MD, PhD, and research specialist Adolfo A. Martinez, MD, discovered that excessive body weight is associated with a thickening of the heart muscle in the left ventricle, the heart's pumping chamber. Known to physicians as left ventricular hypertrophy (LVH), the condition potentially can lead to heart failure and rhythm problems.

"We observed that the thickening in the muscle wall becomes especially noticeable in obese patients who have a Body Mass Index (BMI) of 30 or greater," says Dr. Movahed. "Previous studies have shown that left ventricular hypertrophy is associated with a higher risk of mortality."

Analyzing 17,261 heart ultrasounds, the UA researchers studied moving images of the heart to evaluate structure and function. Results showed that narrowing of the aortic valve, the main valve that carries blood away from the heart to the rest of the body, was the strongest predictor of LVH, followed by gender and Body Mass Index.

While the cause of LVH in obese patients is not known, it may be related to increased work load or to the presence of other cardiac risk factors in these patients.

The findings may guide physicians who study obesity and cardiac function. Drs. Movahed and Martinez presented the results of their study at the 18th Annual Scientific Sessions of the American Society of Echocardiography (ASE) in Seattle, Wash. The meeting concludes June 20.

"These results are another stake in the ground that supports healthy lifestyles for the benefit of heart protection," says Dr. Movahed. "Maintaining a proportionate BMI may prevent LVH and lead to

better heart function."

Source: University of Arizona Health Sciences Center



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