



57<sup>th</sup> Annual Scientific Session  
MARCH 29 – APRIL 1 • CHICAGO

FOR IMMEDIATE RELEASE  
Saturday, March 29, 2008  
11:00 a.m. CDT

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## **Morbid Obesity Levels the Playing Field When it Comes to Gender-Related Cardiovascular Risk**

### ***Excess Obesity May Be Somewhat Protective for Ischemic Heart Disease***

**CHICAGO, IL** – Heart disease remains the leading killer of men and women; but while men tend to be at greater risk for developing heart problems, cardiovascular risk profiles often vary between genders. A new study suggests such gender-related differences disappear in patients who are morbidly obese compared to those who are overweight or obese, according to data presented today at the American College of Cardiology’s 57<sup>th</sup> Annual Scientific Session. Researchers attribute this phenomenon to high levels of estrogen in men with morbid obesity, which makes them more similar to females than their overweight or obese counterparts.

“Our data suggests that patients’ cardiovascular risk profile is associated with their gender largely because of differences in hormones. When these differences are reduced, as we see in morbidly obese patients, risk factors are similar,” said Luigi Biasucci, M.D., of Catholic University in Rome. “These findings suggest that the relationship between risk factors and disease may be more complex than believed.”

Morbidly obese patients have high levels of estrogen due to expanded subcutaneous fat tissue (stored under the skin), which converts the male sex hormone, androgen, into estrogen through a converting enzyme, called aromatase. Excess obesity does not carry additional cardiovascular risk, according to the data. In fact, morbidly obese subjects appear to have a lower incidence of high blood pressure and cholesterol—both important risk factors for heart disease.

“Morbid obesity may be somehow protective due, in part, to increased estrogen levels,” said Dr.

Biasucci. “The risk of ischemic heart disease and heart attack is lower in morbidly obese patients compared to those who are overweight or obese. However, these patients may have a higher risk of heart failure, cancer and pulmonary disease, so it’s certainly not safe.”

This study enrolled 71 healthy patients with no signs of diabetes or heart disease. Subjects were divided into two groups based on their body mass index (BMI). Group 1 included 48 patients with BMI ranging from 20 to 39.9; group 2 was comprised of 23 morbidly obese patients with BMI greater than 40. Cardiovascular risk factors were assessed and compared in relation to gender differences.

In the overweight and obese group, weight, waist circumference, triglycerides, leptin levels, median intima-media thickness (a measure of atherosclerosis), number of patients with carotid plaques and hypertension were significantly lower in females compared to males. Conversely, HDL (“good” cholesterol) and estrogen levels were higher in females. In contrast, no significant differences between males and females were found in morbidly obese patients.

Based on these results, researchers believe cardiovascular risk needs to be differentially assessed in patients with morbid obesity compared to others. This will better inform patients’ treatment plan. “For morbidly obese patients, it may be less important to focus on triglycerides and cholesterol than to encourage weight loss,” adds Dr. Biasucci. “This doesn’t mean these patients can drink [alcohol] excessively, smoke, not reduce high cholesterol and so on, but differentiating their risk profile can help clinicians prioritize efforts to reduce cardiovascular risk.”

*Dr. Biasucci will present Morbid Obesity Abolishes Gender Differences in Cardiovascular Risk Factors on Saturday, March 29 at 11:00 a.m.*

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The American College of Cardiology ([www.acc.org](http://www.acc.org)) represents the majority of board certified cardiovascular physicians in the United States. Its mission is to advocate for quality cardiovascular care through education, research, promotion, development and application of standards and guidelines- and to influence health care policy. ACC.08 is the largest cardiovascular meeting, bringing together cardiologists and cardiovascular specialists to share the newest discoveries in treatment and prevention, while helping the ACC achieve its mission to address and improve issues in cardiovascular medicine.