

The impact of obesity on cardiovascular disease risk factors and subclinical vascular disease: the Multi-Ethnic Study of Atherosclerosis.

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BACKGROUND: To assess the importance of the obesity epidemic on cardiovascular disease (CVD) risk, we determined the prevalence of obesity and the relationship of obesity to CVD risk factors and subclinical vascular disease. **METHODS:** The Multi-Ethnic Study of Atherosclerosis is an observational cohort study involving 6814 persons aged 45 to 84 years who were free of clinical CVD at baseline (2000-2002). The study assessed the association between body size and CVD risk factors, medication use, and subclinical vascular disease (coronary artery calcium, carotid artery intimal medial thickness, and left ventricular mass). **RESULTS:** A large proportion of white, African American, and Hispanic participants were overweight (60% to 85%) and obese (30% to 50%), while fewer Chinese American participants were overweight (33%) or obese (5%). Hypertension and diabetes were more prevalent in obese participants despite a much higher use of antihypertensive and/or antidiabetic medications. Obesity was associated with a greater risk of coronary artery calcium (17%), internal carotid artery intimal medial thickness greater than 80th percentile (32%), common carotid artery intimal medial thickness greater than 80th percentile (45%), and left ventricular mass greater than 80th percentile (2.7-fold greater) compared with normal body size. These associations persisted after adjustment for traditional CVD risk factors. **CONCLUSIONS:** These data confirm the epidemic of obesity in most but not all racial and ethnic groups. The observed low prevalence of obesity in Chinese American participants indicates that high rates of obesity should not be considered inevitable. These findings may be viewed as indicators of potential future increases in vascular disease burden and health care costs associated with the obesity epidemic.