Obesity, Risk Factors, and Predicting Cardiovascular Events

Michael H. Criqui, MD, MPH

A PubMed search in March 2005 with the key word “metabolic syndrome” yielded >10 000 references. Past labels for this disorder include “syndrome X,” “deadly quartet,” and “cardiovascular dysmetabolic syndrome.” What is driving the current increased interest in the metabolic syndrome? Possibly the impetus comes from the dramatic increases in obesity in the United States and other developed countries. This pandemic has been blamed variously on fast food, high-fat foods, low-fat foods, overreliance on the automobile, television, the Internet, homes in which both parents work, unsafe streets, the disappearance of physical education from the K–12 school curriculum, neighborhoods unsuitable for walking, and some or all of the above. An extensive and consistent body of evidence predicts that accompanying this increase in obesity will be increases in insulin resistance/diabetes, hypertension, hypertriglyceridemia, and decreased HDL cholesterol, as well as unfavorable changes in endothelial function and a host of inflammatory, thrombotic, and fibrinolytic factors. Thus, there is, indeed, reason for concern.

The opinions expressed in this article are not necessarily those of the editors or of the American Heart Association.

From the Department of Family and Preventive Medicine, University of California–San Diego School of Medicine, La Jolla, Calif.

Correspondence to Michael H. Criqui, MD, MPH, Professor, Dept of Family and Preventive Medicine, UCSD School of Medicine, 9500 Gilman Dr, 352 SCRIB, La Jolla, CA 92039-0607. E-mail mcriqui@ucsd.edu

(Circulation. 2005;111:1869-1870.)

© 2005 American Heart Association, Inc.

Circulation is available at http://www.circulationaha.org
DOI: 10.1161/01.CIR.0000163649.99244.A8
hypertension, and again, enlarged waist was not predictive. The EWET ignores low HDL cholesterol and hypertension, although many women with EWET will of course have these because these risk factors are correlated. Thus, the findings of this study support an extensive body of literature showing that elevated triglycerides, low HDL cholesterol, and hypertension pose independent risks for CVD mortality in postmenopausal women. Cigarette smoking was presumably a risk factor as well, although hazard ratios for this variable were not presented.

Tankó et al summarize by stating they believe that “EWET comprises a simple diagnostic tool” and “further evaluation of EWET as a universally applicable screening tool . . . is warranted.” I believe the authors’ data support a different conclusion: that abnormal triglycerides, HDL cholesterol, and blood pressure should be measured, along with other independent CVD risk factors, to provide the best estimate of CVD risk. Indeed, why would you not consider HDL cholesterol if you were planning to measure triglycerides? Why would you not consider the important and routinely available blood pressure? The authors further conclude, with admirable scientific caution, “intervention studies are timely available blood pressure?” The authors further conclude, with admirable scientific caution, “intervention studies are timely available blood pressure?” Why would you not consider the important and routinely available blood pressure? The authors further conclude, with admirable scientific caution, “intervention studies are timely available blood pressure?”

Methods to reduce obesity and improve obesity-related risk factors have not changed much throughout the course of history; they involve reduced calorie consumption or increased physical activity, and ideally both in the typical patient. Dietary weight loss and accompanying CVD risk factor reduction are direct results of reduced calorie intake and are largely unrelated to the composition of the diet used, although individual components of diet, such as fruit, omega-3 polyunsaturated fats, and fiber, may provide additional health benefits. Of course, not all risk factors accompany obesity, and some individuals have “obesity-related” risk factors without being obese. Although pharmacological therapy will remain a mainstay of treatment, significant improvement in CVD risk factors is possible with lifestyle changes alone. Curbing the obesity epidemic at an individual and a societal level is as daunting a challenge as it is worthy a goal.

References