



Body-mass index and waist circumference equally predictive for CV events, mortality

The Hague, the Netherlands - A large prospective study of more than 20,000 Dutch people has shown that body-mass index (BMI) and waist circumference (WC)—accurately measured by trained staff—were equally predictive of cardiovascular disease events and mortality over 10 years.

"In terms of the predictive value for risk of cardiovascular disease or death, BMI and WC were more or less the same," lead author **Dr Ineke van Dis** (Netherlands Heart Foundation, The Hague). She said this is "the most surprising finding" of the study "because from the literature, we got the impression that WC was preferable."

The researchers also found a stronger association between obesity/overweight and both fatal and nonfatal Cardiovascular Disease than previously seen.

Association of obesity twice as strong for fatal compared with nonfatal CVD

In the study, baseline assessments of BMI and WC were performed between 1993 and 1997 in men and women from the general population aged 20 to 65 years. Measurements were taken again 10 years later, and the average figures used in the assessment. BMI and WC were studied in relation to absolute risk, hazard ratio, attributable risk, and population-attributable risk (PAR) for 10-year fatal and nonfatal CVD. All risks were adjusted for age and sex.

In obese respondents (BMI equal or greater than 30), relative risk of fatal CVD was fourfold higher and risk of nonfatal CVD was twofold higher than in normal-weight respondents. Similar associations were observed for WC (≥ 88 cm vs < 80 cm in women and ≥ 102 cm vs < 94 cm in men).

In those with BMI equal or greater than 25, half of all fatal CVD and a quarter of nonfatal CVD were ascribed to their being overweight.

BMI and WC equally predictive for risk prediction in general population

The fact that BMI and WC were equally predictive for CVD morbidity and mortality could be due to the fact that they were accurately measured by trained staff in this study, van Dis said.

This is also possibly the explanation as to why there was a stronger association between obesity/overweight and both fatal and nonfatal CVD than has previously been seen, she says. "Most of the prior results in this field, including large American studies, have been done using self-reporting of data." With this method of reporting, normal-weight or underweight people tend to overestimate their BMI and the overweight and obese tend to underestimate it, she explained.

Burden shifting: 10 times higher incidence of nonfatal than fatal CVD

Although obesity was more strongly associated with fatal than nonfatal CVD, the researchers note that they "found a 10 times higher incidence of nonfatal CVD compared with fatal CVD in this relatively young cohort."

This is likely due to the strongly improved survival of CVD patients in many Western countries, they note, so that the burden of CVD is nowadays strongly determined by CVD morbidity.

