



Waist Circumference Linked to All-Cause Mortality in Older Adults

Laurie Barclay, MD

August 9, 2010 — Waist circumference (WC) is a risk factor for mortality in older adults, regardless of body mass index (BMI), according to the results of a large US cohort study reported in the August 9/23 issue of the *Archives of Internal Medicine*.

"[WC], a measure of abdominal obesity, is associated with higher mortality independent of [BMI]," write Eric J. Jacobs, PhD, from the American Cancer Society in Atlanta, Georgia, and colleagues. "Less is known about the association between WC and mortality within categories of BMI or for the very high levels of WC that are now common."

Using the Cancer Prevention Study II Nutrition Cohort, the investigators evaluated the association between WC and mortality among 48,500 men and 56,343 women, aged at least 50 years. Between 1997 and the end of follow-up in 2006, there were 9315 deaths in men and 5332 in women.

Risk for mortality was more than doubled for very high levels of WC after adjustment for BMI and other risk factors. Among men, relative risk (RR) of mortality was 2.02 (95% confidence interval [CI], 1.71 - 2.39) for WC 120 cm or larger compared with WC less than 90 cm. Among women, RR was 2.36 (95% CI, 1.98 - 2.82) for WC 110 cm or larger compared with WC less than 75 cm.

Within all categories of BMI, WC was positively associated with mortality. A 10-cm increase in WC in men was associated with RRs of 1.16 (95% CI, 1.09 - 1.23) for normal (BMI, 18.5 kg/m² to <25 kg/m²), 1.18 (95% CI, 1.12 - 1.24) for overweight (BMI, 25 kg/m² to <30 kg/m²), and 1.21 (95% CI, 1.13 - 1.30) for obese (BMI, ≥30 kg/m²) BMI. For women, RRs were 1.25 (95% CI, 1.18 - 1.32), 1.15 (95% CI, 1.08 - 1.22), and 1.13 (95% CI, 1.06 - 1.20), respectively.

Limitations of this study include reliance on self-report and measurement for WC, observational design, possible confounding by factors associated with both larger WC and higher mortality, and possibly low generalizability because all study participants were 50 years or older, and nearly all were white.

"Results from this large prospective study emphasize the importance of WC as a risk factor for mortality in older adults, regardless of whether the BMI is categorized as normal, overweight, or obese," the study authors write. "Our results suggest that, regardless of weight, avoiding gains in WC may reduce risk of premature mortality."

The study authors have disclosed no relevant financial relationships.

Arch Intern Med. 2010;170:1293-1301.