Women develop diabetes at higher BMIs than men

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To the Editor: In their analysis of the British Regional Heart Study and the British Women's Heart Health Study, Wannamethee and colleagues report that women develop diabetes at higher BMIs than men [1]. This is a well-recognised finding. In 1988 the UK Prospective Diabetes Study (UKPDS) demonstrated, in 1,857 Caucasian, Afro-Caribbean and Asian patients, that men with newly diagnosed type 2 diabetes were significantly less obese than their female counterparts, being $120.8 \pm 19.7\%$ vs $140.9 \pm 29.1\%$ (mean $\pm$ SD) of ideal body weight, respectively [2]. This result was subsequently confirmed by a study using a US database, which also showed that BMI was higher for women with newly diagnosed diabetes than for men, although this difference declined with age [3].

More recently, a prospective analysis of the Monitoring Trends and Determinants in Cardiovascular Diseases (MONICA) Augsburg cohort study showed that the diabetes incidence rate per 10,000 person-years was substantially higher in men below the lowest BMI quartile ($<25.1 \text{ kg/m}^2$) than women ($<23.4 \text{ kg/m}^2$), being 31.3 and 5.5, respectively

[4]. However, the multivariate adjusted hazard ratio for incident type 2 diabetes for those above the highest quartile, compared with those below the lowest quartile, was greater in women (10.6) than in men (4.2), suggesting a much steeper rise in diabetes incidence with increasing BMI in women. This finding was noted in 1985 by Bonham and Brock in their analysis of the National Health Interview Survey, which stated that '...the prevalence of reported diabetes increased more rapidly with increased body mass among women than men' [5].

We agree with Wannamethee and colleagues that the higher degree of adiposity seen in women than men with new-onset diabetes may explain in part the higher risk for cardiovascular disease observed in women with diabetes relative to men with diabetes, compared with their non-diabetic counterparts.

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