
**Abstract**

**OBJECTIVE:** To assess the shape and strength of the association between usual blood glucose and cardiovascular disease (CVD) in Asian and Australasian cohorts and to determine the impact of adjusting for other determinants of CVD risk and excluding people with diabetes.

**RESEARCH DESIGN AND METHODS:** Relative risk estimates and 95% CIs were calculated from Cox models, stratified by sex and cohort, and adjusted for age at risk on individual participant data from 17 cohort studies. Repeat measurements of blood glucose were used to adjust for regression dilution bias.

**RESULTS:** Fasting blood glucose data were available for 237,468 participants, and during approximately 1.2 million person-years of follow-up, there were 1,661 stroke and 816 ischemic heart disease (IHD) events. Data were also available on 27,996 participants with nonfasting glucose measurements. Continuous positive associations were demonstrated between usual fasting glucose and the risks of CVD down to at least 4.9 mmol/l. Overall, each 1 mmol/l lower usual fasting glucose was associated with a 21% (95% CI 18-24%) lower risk of total stroke and a 23% (19-27%) lower risk of total IHD. The associations were similar in men and women, across age-groups, and in Asian compared with Australasian (Australia and New Zealand) populations. Adjusting for potential confounders or removing those with diabetes as baseline did not substantially affect the associations. Associations for nonfasting glucose were weaker than those with fasting glucose.

**CONCLUSIONS:** Fasting blood glucose is an important determinant of CVD burden, with considerable potential benefit of usual blood glucose lowering down to levels of at least 4.9 mmol/l.