

Diabetic Women Have High Risk of Coronary Heart Disease



Diabetic women are 44% more likely to develop coronary heart disease (CHD) compared to men with diabetes, according to a systematic review of more than 850,000 cases, published in *Diabetologia*. This difference is independent of gender differences in the levels of other major cardiovascular risk factors.

Researchers analysed data from 1996 to 2011, published in 64 different studies and covering 28,203 CHD events. Their analysis showed that diabetic women were almost three times more likely to develop CHD (actual relative risk 2.82) than women without diabetes, while men with diabetes were only two times more likely (actual relative risk 2.16) to develop CHD than non-diabetic men. The two sets of data combined showed that women with diabetes were 44% more likely to develop CHD than men with diabetes even after consideration was made for sex differences in other CHD factors.

The authors note that this study backs up findings from a smaller analysis showing a 46% increased risk of dying from CHD in women with diabetes compared with diabetic men. In this new analysis the sex difference in diabetes-related risk for incident CHD was consistent across subgroups defined by age and region and remained unchanged after excluding non-fatal CHD events. They observe that in another of their previous studies, diabetes in women increased the risk of stroke by 25% compared with diabetes in men. They suggest that these data taken together provide compelling evidence that diabetes poses a greater relative risk for cardiovascular diseases in women than in men.

Causes

The authors discuss possible reasons for this large difference. These include undertreatment of risk factors for CHD in women in the past (seen in studies prior to 1985). In more recent times women with diabetes in general have been less likely to achieve treatment targets. The authors agree with other authors on the subject that women may have to metabolically deteriorate further than men to become diabetic, and are therefore at a worse starting point even before treatment begins. In addition, in the prediabetic state where glucose tolerance may already be impaired but does not meet all diagnostic criteria for diabetes, risk factor levels are more elevated in women than in men, for example greater levels of adiposity.

Regarding the role of doctors, the authors suggest that doctors may recognise CHD symptoms in men earlier than in women due to men's higher absolute risk, and therefore there may still be gender differences in use of medication and risk factor control. They recommend that greater awareness of early symptoms of CHD in women and sex-specific therapeutic risk factor management, regardless of the presence of diabetes, will be the best way to improve clinical outcomes for both sexes.

The authors conclude that further studies are needed to investigate the actual mechanisms responsible for the difference in diabetes-related coronary risk between the sexes.

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