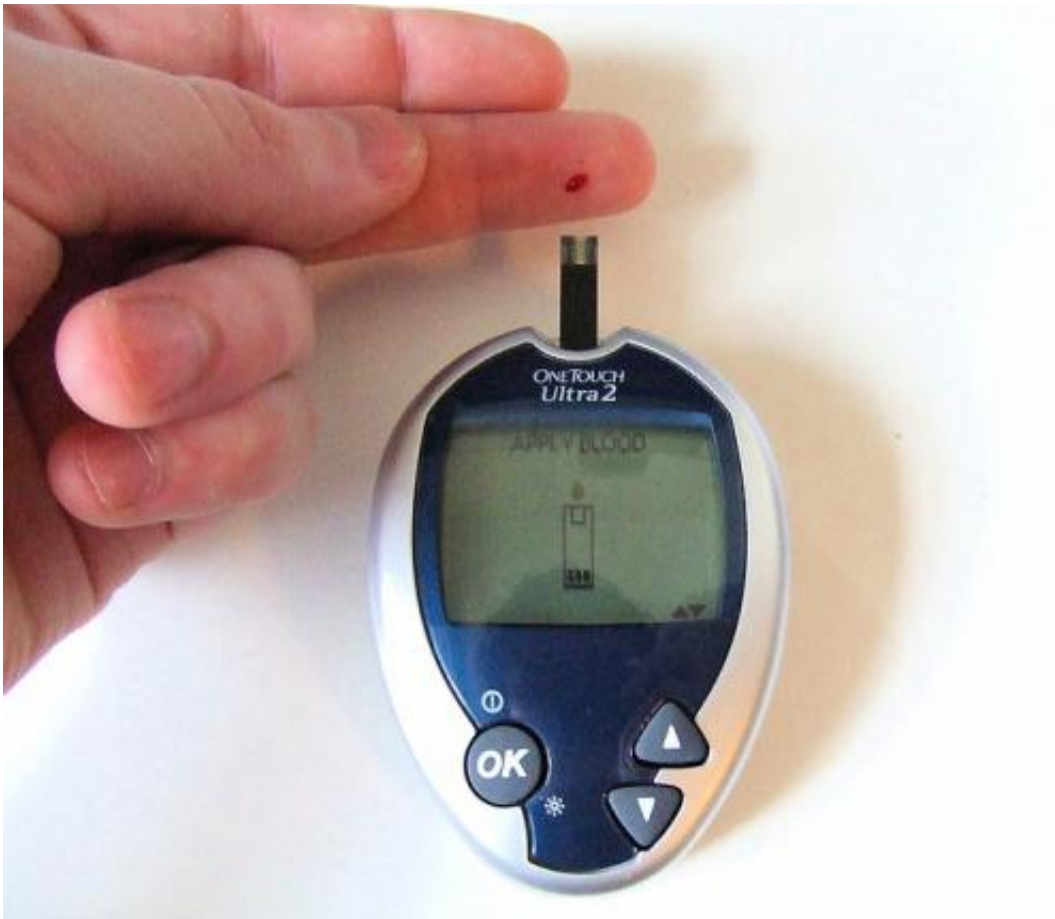


Women with diabetes 44 percent more likely to develop coronary heart disease than men

May 22 2014



Blood glucose monitoring. Credit: Wikipedia

A systematic review and meta-analysis of some 850,000 people published in *Diabetologia* (the journal of the European Association for

the Study of Diabetes) shows that women with diabetes are 44% more likely to develop coronary heart disease (CHD) than men with diabetes independent of sex differences in the levels of other major cardiovascular risk factors. The research is by Professor Rachel Huxley, School of Population Health, University of Queensland, Australia; Dr Sanne Peters, University of Cambridge, UK, and University Medical Center Utrecht, the Netherlands, and Professor Mark Woodward, George Institute for Global Health, Sydney, Australia.

The data used in the study stretches back almost 50 years, from 1966 to 2011, and includes 64 studies, 858,507 people and 28,203 incident CHD events. Women with diabetes were almost 3 times more likely to develop CHD (actual relative risk 2.82) compared with women without diabetes, while men with diabetes were only twice as likely (actual relative risk 2.16) to develop CHD than men without diabetes. Combining the two sets of data 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 say that this study, the largest ever of its kind backs up findings from a smaller analysis including fewer studies that showed a 46% increased risk of dying from CHD in women with diabetes compared with men with diabetes. In this new analysis by Huxley and colleagues, 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 note that in another previous study they authored, diabetes in women increased the risk of stroke by 25% compared with diabetes in men. They say: "Taken together, these data provide convincing evidence that diabetes poses a greater relative risk for cardiovascular diseases in women than in men."

Several possible reasons for the difference are discussed by the authors. Women have, particularly in the past, been undertreated for [risk factors](#)

for cardiovascular disease (evident in studies from 1985 and before). However, even in more contemporary populations, when diabetes is treated similar to men, women have generally been less likely to achieve treatment targets. The authors (along with others before them) speculate that women may have to metabolically deteriorate further than men to become diabetic, so they are at a worse starting point even before treatment begins. Furthermore, in the prediabetic state where glucose tolerance may already be impaired but does not meet all diagnostic criteria of diabetes, risk factor levels are more elevated in women than in men. For example, in the UK General Practice Research Database, the BMI of individuals at the time of diabetes diagnosis was, on average, almost two whole units higher (1.8 kg/m²) in women than in men.

The authors say: "It is conceivable, therefore, that the diabetes-related excess risk of CHD in women may be due to a combination of both a greater deterioration in cardiovascular risk factor levels and a chronically elevated [cardiovascular risk](#) profile in the prediabetic state, driven by greater levels of adiposity in women compared with men."

They add: "If confirmed, the implementation of sex-specific interventions before diabetes becomes manifest—such as increased screening for prediabetes, especially in women, combined with more stringent follow-up of women at high risk for diabetes, such as women with a history of [gestational diabetes](#)—could have a substantial impact on the prevention of CHD."

Regarding the role of doctors, the authors say: "Physicians may be more likely to recognise the early symptoms of CHD in men than women because of men's higher absolute risk, and thus sex differences in medication use and risk factor control may still exist. Greater awareness of early symptoms of CHD in women and sex-specific therapeutic risk factor management, irrespective of the presence of diabetes, will be the best way to improve clinical outcomes in both [women](#) and men."

They conclude: "Women with diabetes have a 44% greater risk of incident CHD compared with men with diabetes. Further studies are warranted to determine the actual mechanisms responsible for the difference in [diabetes](#)-related coronary risk between the sexes."

Provided by Diabetologia

Citation: Women with diabetes 44 percent more likely to develop coronary heart disease than men (2014, May 22) retrieved 18 April 2024 from <https://medicalxpress.com/news/2014-05-women-diabetes-percent-coronary-heart.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--