

# Premature birth associated with increased risk of heart disease in mothers

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Credit: Keele University

A study led by researchers at Keele University has found the risk of death in later life due to coronary heart disease doubles in women who give birth prematurely.

Researchers from Keele University's Research Institute for Primary Care and Health Sciences, together with colleagues at the University Hospital of North Midlands Trust (UHNM), the University of Arizona, and the University of Leicester, analysed 21 studies and over five million women, with the findings published in the *Journal of the American Heart Association*.

Premature [birth](#) (delivery before 37 gestational weeks) affects 10

percent of all pregnancies, and is linked to poor health in premature babies. However, the study found that there are also long-term implications for the mother's health. The study shows women who give birth before 37 weeks are 1.4-1.6 times more likely to experience [cardiovascular disease](#), stroke, and coronary heart disease than mothers who give birth at full term (39 weeks), and also have double the [risk](#) of death caused by [coronary heart disease](#).

The study promotes the importance of [cardiovascular risk](#) assessments in women who give birth prematurely, in order to identify high-risk individuals. These individuals can be targeted to reduce the risk of future cardiovascular events by encouraging a healthy lifestyle and behavioural changes, and prescribing drug therapies which will help reduce their risks.

Lead author Dr. Pensee Wu, Keele University lecturer and Honorary Consultant Obstetrician at the University Hospital of North Midlands NHS Trust, commented: "Doctors need to be aware that women who have had premature births are at higher risk of cardiovascular disease, and should be considering obstetric history during a woman's cardiovascular risk assessment.

"I hope this work will raise awareness amongst hospitals and [primary care](#) doctors of the lifestyle advice that they can give women who have had a preterm birth in the past. With funding from the National Institute for Health Research (NIHR) we are conducting further research to understand the causes of increased cardiovascular risk in women who have premature births."

Mamas Mamas, senior author of the study and Professor of Cardiology at Keele University, added: "Obstetricians and cardiologists need to work closer together in treating these patients identified as high risk, with the development of shared treatment pathways that cross medical specialities

and target interventions to this high risk group."

**More information:** Pensée Wu et al. Preterm Delivery and Future Risk of Maternal Cardiovascular Disease: A Systematic Review and Meta-Analysis, *Journal of the American Heart Association* (2018). [DOI: 10.1161/JAHA.117.007809](https://doi.org/10.1161/JAHA.117.007809)

Provided by Keele University

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