

# Study reveals pre-eclampsia increases risk of heart disease in later life

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Research led by Keele University has demonstrated that women who suffered pre-eclampsia during pregnancy are four times more likely to have heart failure in later life.

The study also found that expectant mothers with pre-eclampsia, which presents with [high blood pressure](#) and protein in the woman's urine, have a two-fold increase risk of coronary heart disease, stroke and death due to cardiovascular disease in later life.

Pre-eclampsia affects five to eight per cent of pregnancies and is the most common cause of severe ill-health during pregnancy which can, in extreme circumstances, lead to death of the mother or baby.

The findings, involving the analysis of 22 studies and more than 6.5 million women, have been published in the Go Red for Women Spotlight collection of the prestigious journal, *Circulation: Cardiovascular Quality and Outcomes*.

The authors of the study are calling for doctors to offer better advice to women about the increased

risks, and the actions they can take to avoid future ill-health.

Dr Pensee Wu, the first author of this publication and lecturer in Obstetrics and Gynaecology at Keele University, said: "Doctors need to be aware of the importance of educating women about their increased level of cardiovascular risk and of advising women about the beneficial effects of changing their lifestyle, such as increasing their level of physical activity and not smoking.

"I hope this work will raise awareness amongst hospital doctors of the advice that they need to give to women with pre-eclampsia."

Dr Wu, who is also an Honorary Consultant Obstetrician and Maternal Fetal Medicine Subspecialist at University Hospital of North Midlands NHS Trust, added: "The study shows the risk is highest during the first ten years after a pregnancy affected by pre-eclampsia, so it is important that women are regularly monitored during this period for [cardiovascular risk](#) factors such as high blood pressure, high cholesterol and obesity."

"The risks begins to increase for [coronary heart disease](#), [heart failure](#) and stroke within one year after giving birth, but it is highest between one to ten years after giving birth."

The study was a collaboration between researchers at Keele University's Institute for Applied Clinical Science (iACS) and Institute for Science & Technology in Medicine (ISTM), along with Primary Care and Health Sciences (iPCHS), and the University Hospital of North Midlands NHS Trust (UHNM).

Dr Randula Haththotuwa, co-author, Academic Clinical Fellow, and trainee GP funded by the National Institute for Health Research, added: "This study is extremely important for general practice as

it will highlight the importance of lifelong monitoring of women who have suffered from pre-eclampsia of [cardiovascular risk factors](#)."

Last year, Dr Wu, Dr Haththotuwa and their collaborators published another paper identifying a link between pre-eclampsia in pregnancy and the development of diabetes in later life. The study showed that pre-eclampsia is independently associated with a two-fold increase in future diabetes. This increased risk was found to occur from less than one year after delivery of the baby and persisted to over ten years after birth. Again, this highlights the need for monitoring of [women](#) in primary care.

Provided by Keele University

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