

Common cardiovascular disease drug could help hearts of at-risk new mums

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A drug has shown potential to improve heart function in women diagnosed with preeclampsia during their pregnancy, research carried out by Manchester University NHS Foundation Trust (MFT) and The University of Manchester (UoM) has found.

The results of the 'Postnatal enalapril to Improve Cardiovascular fUnction following preterm Preeclampsia' (PICK-UP) feasibility trial were published in the peer-reviewed journal *Hypertension* today.

Enalapril is a medicine already available on the NHS, and is used to reduce [high blood pressure](#) and to prevent or treat heart failure. Preeclampsia is a condition that affects some [pregnant women](#), the main symptom of which is high blood pressure (hypertension).

High blood pressure in pregnancy is associated with future [cardiovascular disease](#) (CVD), a general term for conditions affecting the heart or blood vessels. Because of this, researchers from the Tommy's Manchester Maternal and Fetal

Health Research Centre, at Saint Mary's Hospital, saw an opportunity to identify [women](#) who could benefit from targeted treatment at an early stage.

The PICK-UP study focused on the highest-risk group—women with pre-term preeclampsia—who have an eight-fold risk of developing serious CVD in future.

60 women receiving care at Saint Mary's Hospital—part of MFT—consented to take part in the six-month pilot study, funded by the Medical Research Council. Results indicate that those who received enalapril showed improved [heart function](#), compared with those receiving a placebo.

Enalapril was given to women after birth, as the drug is not safe to take during pregnancy, but is safe in breastfeeding mothers.

Dr. Laura Ormesher, a Clinical Research Fellow at the Tommy's Manchester Maternal and Fetal Health Research Centre—a partnership between MFT and The University of Manchester—is the lead author of the PICK-UP study.

Dr. Ormesher said: "We are extremely grateful to the women who took part in PICK-UP. Our results have shown early potential to improve maternal health in the postnatal period, with a safe and affordable medicine.

"We now plan to take this further, aiming to expand the study across the UK and are very excited about the next steps."

Jenny Myers, Consultant Obstetrician at Saint Mary's Hospital, Professor of Obstetrics and Maternal Medicine at UoM and Chief Investigator of the study said: "This is fantastic work from Dr. Ormesher and the multidisciplinary team that delivered this study.

"Women diagnosed with preterm preeclampsia are

eight times more likely to develop serious cardiovascular disease in future—to date there are no treatments which have been proven to reduce this risk. This study is the first step towards an acceptable treatment for women, which if shown to be effective in larger studies, could dramatically improve the long-term health of the women affected by this common pregnancy complication.

"This pilot has confirmed the feasibility of this treatment, and we are now ready to plan a larger clinical trial at other hospitals nationally, which is one of many great examples MFT leading the way with our cutting-edge research and innovation."

More information: Laura Ormesher et al. Postnatal Enalapril to Improve Cardiovascular Function Following Preterm Preeclampsia (PICK-UP); *Hypertension* (2020). DOI: [10.1161/HYPERTENSIONAHA.120.15875](https://doi.org/10.1161/HYPERTENSIONAHA.120.15875)

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