

Heart drugs could cut blood pressure risks in pregnancy

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Pregnant women could benefit from a pioneering trial that will test whether heart disease drugs can be used to treat pre-eclampsia.

Researchers are investigating if a class of drugs - known as statins - can prevent the potentially fatal condition, which affects up to eight per cent of pregnant women in the UK.

The world's first trial on statins in pregnancy follows on from research showing that statins, which are prescribed to lower heart disease, could also help to decrease amounts of two proteins linked to inducing pre-eclampsia.

Statins act on an enzyme that suppresses the production of these proteins - soluble FLt-1 and soluble endoglin.

The trial, funded by the Medical Research Council and led by the University of Edinburgh, will involve pregnant women in the UK diagnosed with very early-onset pre-eclampsia, which occurs in women who are less than 32 weeks pregnant.

It will also involve researchers from the University of Birmingham, University College London Hospital and Queen Mary, University of London.

The study follows on from previous research that shows the enzyme involved - heme oxygenase 1 - produces [carbon monoxide](#) within cells.

This could explain why female smokers, who have higher levels of carbon monoxide in their blood, have a lower risk of pre-eclampsia.

The condition, which is responsible for around four million premature births worldwide each year, causes [high blood pressure](#), inflammation of the lining of blood vessels and can also cause kidney and liver damage. In extreme cases, when unmanaged, it can also lead to convulsions and death.

Early onset pre-eclampsia affects one in 100 expectant mothers in Britain. The condition carries greater risk than pre-eclampsia occurring later in the pregnancy because the only treatment for the condition is to deliver babies prematurely.

Professor Asif Ahmed, who is leading the study, stressed that until the results were available, [pregnant women](#) who think they may be susceptible to pre-eclampsia should not ask their doctor to prescribe statins.

Professor Asif Ahmed, of the University of Edinburgh's Centre for Cardiovascular Science, said: "This is the first stage, but we are confident that taking a scientific approach to find a way to alleviate pre-eclampsia would enable us to prolong affected pregnancies, improving the outcome for both the baby and the expectant mother. If successful this could help provide cheap, widely available therapy against pre-eclampsia which could help reduce maternal and infant deaths across the world."

The study is known as StAmP - statins to ameliorate early onset pre-eclampsia.

Professor Max Parmar, Director of the Medical Research Council's Clinical Trials Unit, said: "The MRC supports trials which drive the

translation of discoveries made in the lab into real benefits for public health. The design of the StAmP study means that it should provide important evidence on whether statins, which are already widely used in other conditions, could be exploited even further. Pre-eclampsia is a major problem area in women's health, so it would be a key step forward if this trial provides a positive outcome."

The University of Edinburgh was recently awarded a £1m grant by the Medical Research Council to establish the MRC Centre for Reproductive Health. The centre grant comes in addition to £12m of research grants recently awarded by the MRC to health scientists in Edinburgh. The centre will conduct further research into conditions that affect the reproductive ability and health of both men and women.

Provided by University of Edinburgh

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