

Researchers help fight life-threatening pregnancy condition

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Aston University researchers may have found a solution of a life-threatening pregnancy condition 'Pre-eclampsia'.

Scientists at Aston University have found that [hydrogen sulfide](#), a compound known for its rotten egg odour, could be key to helping prevent life threatening conditions during [early pregnancy](#).

Pre-eclampsia is a condition that affects one in 20 first-time mothers towards the end of pregnancy. The chemical substance is formed naturally in the body, and produces different levels among some women with some producing less than others.

These changes lead to complications for the woman such as high [blood](#)

[pressure](#) and can damage the kidneys and liver. Pre-eclampsia can develop into eclampsia, a type of seizure that can be fatal.

Initial tests carried out by Aston University researchers revealed that giving hydrogen sulfide to [pregnant women](#) could block the release of two chemicals that increase blood pressure in the mother and protect the growth of their babies. The discovery could lead to a treatment for pregnant women being developed by the end of the decade. This will be in pill form because the gas in its natural form is toxic.

Around 20 women die each year from conditions linked to high blood pressure including pre-eclampsia, while around 600 babies a year die as a result of pre-eclampsia. The only treatment currently available is to deliver the baby early with an emergency caesarean.

Professor Asif Ahmed, of [vascular biology](#) at Aston University, who lead the researcher, said; "Our findings show that we can restore foetal growth and fix the vascular abnormalities in the placenta that cause pre-eclampsia by giving back hydrogen sulfide. This is significant because it opens up new therapeutic and diagnostic potential for tackling the disorder in its early stages.

He added;"I am confident that we will have a viable therapy for pre-eclampsia and foetal growth restriction by the end of this decade based around these discoveries. By using drugs to prevent the release of the chemicals that damage the lining of blood vessels in the mother and the [placenta](#), we could provide an effective therapy for pre-eclampsia"

The research is published in the medical journal *Circulation*, which described it as 'ground-breaking'.

Following the recent discovery future research will now build on this initial research to explore ways the condition could either be treated or

prevented.

Provided by Aston University

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