

# Simple bile acid blood test could tell risk of stillbirth

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Clinical researchers at Guy's and St Thomas' and King's College London have found a better way to measure the risk of stillbirth for women with a common liver disorder through a simple blood test.

The discovery will help doctors identify the small number of women at

most risk who require intervention to prevent [stillbirth](#). This will allow the majority of women with intrahepatic cholestasis of pregnancy (ICP) who are at a low risk to carry on their pregnancy normally.

The researchers estimate that implementing this test could prevent hundreds of women having unnecessary early deliveries.

ICP is a liver disorder affecting approximately 5,300 pregnancies annually in the UK—more than 14 every day. The condition causes build-up of bile acids in the blood, and symptoms include itching. It was previously thought that small increases in bile acid concentration are associated with higher risks of stillbirth. Pregnant women showing symptoms of ICP, therefore, are often offered early induction of labour at around 37 weeks in order to prevent stillbirth.

To understand the link between ICP, bile acid levels and stillbirth, the authors analysed more than 170,000 pregnancies from 40 international studies. The work was funded by ICP Support, Tommy's, Genesis Research Trust, Wellcome Trust and the NIHR.

The results, published in *The Lancet*, show that the likelihood of stillbirth as a result of ICP is related to the concentration of bile acids in a pregnant woman's blood. This can be determined by a simple blood test.

Professor Catherine Williamson, Consultant Obstetric Physician and Chair in Women's Health at Guy's and St Thomas' and King's College London, who led the study said:

"We are grateful to our collaborators worldwide who have helped us perform the largest study to date, the results of which will enable doctors to personalise treatment for women with ICP.

"We can now identify those women at the highest risk of stillbirth and

consider interventions to specifically prevent stillbirth in this group. We will also be able to reassure a large number of women, who may have previously been concerned, that they are not at increased risk of stillbirth."

At the moment more than 15% of women with bile acids below the 100 micromole per litre threshold are delivered early: at least 700 a year in the UK and 18,500 globally.

Actress Helen George, Patron of ICP Support, believes that this will be reassuring news for many women with ICP. She said: "My own ICP pregnancy would have been less anxiety-provoking with this latest information but I believe that it's also incredibly important that women who itch continue to let their midwife or doctor know so that they can be tested for the condition."

The results of the study show that for the majority of women with ICP, who have bile acid concentration below 100 micromoles per litre, the risk of stillbirth is not significantly greater than that of [pregnant women](#) without ICP. This means they need no further treatment other than regular bile acid blood tests for the remainder of their pregnancy.

Dr. Caroline Ovadia, Chadburn Clinical Lecturer at King's College London, said: "This marks a real step forward in the diagnosis and management of liver disorders during pregnancy. Being able to measure the risks to women and their babies by simple tests allows doctors to concentrate treatment on those who really need it.

"It also means that women will not have to be offered preterm birth unnecessarily which comes with associated risks to their babies including admission to neonatal units, breathing problems and jaundice.

"We are hopeful our findings will help to improve pregnancy outcomes

in high risk women and allow thousands of pregnant women to be reassured that their ICP does not pose a significant risk to themselves or their baby."

Jenny Chambers, CEO of ICP Support who suffered two stillbirths because of the condition said: "We welcome the news that most women with ICP will now be spared the anxiety of worrying about the possibility of stillbirth. However, it important that health professionals realise that regular bile acid testing until birth is vital to ensure that those [women](#) who are at greater risk aren't missed."

Jane Brewin, Chief Executive of Tommy's said: "Stillbirth devastates parents' lives and Tommy's believes that too many babies still die at full term. This study means that we can detect more otherwise healthy babies who are at risk of sudden death because of their mother's liver condition. This study has the potential to save lives if practice is revised immediately and implemented nationally. Importantly it will prevent babies from being induced early, which carries a risk of lifelong negative consequences for them, and prevent the distress and concern caused to parents who wrongly believe that their baby is at risk."

**More information:** Association of adverse perinatal outcomes of intrahepatic cholestasis of pregnancy with biochemical markers: results of aggregate and individual patient data meta-analyses, *The Lancet* (2019). [DOI: 10.1016/S0140-6736\(18\)31877-4](https://doi.org/10.1016/S0140-6736(18)31877-4) , [www.thelancet.com/journals/lan ... \(18\)31877-4/fulltext](http://www.thelancet.com/journals/lan... (18)31877-4/fulltext)

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