

Understanding the mystery of preterm birth

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Researchers at the University of Adelaide's Robinson Institute say there is still a lack of knowledge about the causes of preterm birth and what can be done to prevent it.

About one in every 10 babies is born too soon (less than 37 weeks gestation). This can carry immediate risks to the baby's health and survival because their brain and other organs are not fully developed, but there is also growing evidence to suggest that babies born preterm may be prone to educational and [societal impacts](#) in later life.

Speaking in the lead up to World Prematurity Day (Sunday 17 November), the Robinson Institute's preterm research priority leader, Philippa Middleton, says preterm birth is a major problem throughout the world.

"Preterm birth is also still a mystery – often we do not know what has caused a baby to be born too soon. But we do know that there may be long-term consequences," Ms Middleton says.

"The rate of preterm birth has been static for a decade, and it's not going down in most parts of the world. When you consider how much the quality of healthcare has improved over that time, with no inroads into the number of preterm births, this is a real puzzle for researchers and clinicians.

"Factors such as having a first child later in life have been linked to the growing numbers of preterm births, but this is also part of a larger social

shift," she says. "Avoiding non-medical caesareans and early inductions could help prevent some babies from being born too early.

"Programs to support pregnant women, particularly those women without access to a lot of resources, are very important. These include help to stop smoking and to improve nutrition," she says.

Ms Middleton says University of Adelaide researchers are working on three main areas in relation to prematurity: preventing preterm birth, predicting when it will occur, and responding to preterm birth with interventions that offer children the best chance of life physically, intellectually and socially. All three areas involve gaining a better understanding the biology and genetics of preterm birth.

"At the Robinson Institute, we've been making great progress around improving outcomes for babies born early – there has been some really promising work done on improving nutrition and lung and brain development in [preterm babies](#), before and after they're born, to give just a few examples. Prevention really is the 'Holy Grail', but no-one in the world has been able to crack it yet. It's something we'll keep working very hard to achieve," she says.

The Director of The Robinson Institute, Professor Sarah Robertson, says the Institute has secured funding as part of an international program from The Gates Foundation to help address how to prevent [preterm birth](#)

"The challenge is to understand how factors including infection, stress and immune responses interact in some women," she says. "Once we have the biology sorted out, then we can test new interventions to prevent the birth process happening too early."

Provided by University of Adelaide

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