

Message to parents: Babies don't 'start from scratch'

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Credit: Anna Langova/public domain

There's now overwhelming evidence that a child's future health is influenced by more than just their parents' genetic material, and that children born of unhealthy parents will already be pre-programmed for greater risk of poor health, according to [University of Adelaide](#) researchers.

In a feature paper called "Parenting from before conception" published in today's issue of the top international journal *Science*, researchers at the University's Robinson Research Institute say [environmental factors](#) prior to conception have more influence on the child's future than previously thought.

"This really is a new frontier for reproductive and developmental research," says corresponding author and Director of the University's Robinson Research Institute, Professor Sarah Robertson.

"It's only been in the last 10 years that the science community has been seriously discussing these issues, and only in the last five years that we've begun to understand the mechanisms of how this is happening – with much of the work conducted right here at the University of Adelaide."

The paper concludes that parental influences on a child begin before conception, because stored environmental factors in the egg and sperm are contributing more than just [genetic material](#) to the child.

"Many things we do in the lead up to conceiving is having an impact on the future development of the child – from the age of the [parents](#), to poor diet, obesity, smoking and many other factors, all of which influence environmental signals transmitted into the embryo," Professor Robertson says.

"People used to think that it didn't matter, because a child represented a new beginning, with a fresh start. The reality is, we can now say with great certainty that the child doesn't quite start from scratch – they already carry over a legacy of factors from their parents' experiences that can shape development in the fetus and after birth. Depending on the situation, we can give our children a burden before they've even started life."

This includes a higher risk of metabolic diseases, such as diabetes and cardiovascular disease. The likelihood of conditions like anxiety and immune dysfunction can also be affected.

Professor Robertson says current research is also showing that the fathers have a much greater role to play in this than previously thought.

Professor Robertson says this news is not all doom and gloom for would-be parents. "A few lifestyle changes by potential parents and improvements in the right direction, especially in the months leading up to conception, could have a lasting, positive benefit for the future of their [child](#)," she says.

More information: "Parenting from before conception" *Science*, [www.sciencemag.org/lookup/doi/ ... 1126/science.1254400](http://www.sciencemag.org/lookup/doi/10.1126/science.1254400)

Provided by University of Adelaide

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