

Early research suggests climate change could lead to more stillbirths

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Scientists are investigating whether rising global temperatures may lead to more stillbirths, saying further study is needed on the subject as climates change.

Researchers from The University of Queensland's School of Earth and Environmental Science and the Mater Research Institute reviewed 12 studies, finding extreme ambient [temperature](#) exposures throughout pregnancy appeared to increase risk of [stillbirth](#), particularly late in pregnancy.

UQ Ph.D. candidate Jessica Sexton said while this was very early research, it did show a possible link between stillbirth and high and low ambient temperature exposures during pregnancy.

"Overall, risk of stillbirth appears to increase when the ambient temperature is below 15 degrees Celsius and above 23.4 degrees Celsius, with the highest risk being above 29.4 degrees Celsius," Ms Sexton said.

"An estimated 17 to 19 percent of stillbirths are potentially attributable to chronic exposure to extreme hot and cold temperatures during

pregnancy.

"And, as the world's temperatures rise due to climate change, this link will potentially increase stillbirth likelihood globally.

"But these findings are from the very limited research currently available, so expectant mothers shouldn't be anxious—there's still plenty of follow-up research that needs to happen."

Environmental scientist Dr. Scott Lieske said the findings suggested that as temperatures rise, women in the [developing world](#) would feel the effects..

"More than two million stillbirths occur every year around the world, with the most occurring in low resource settings," Dr. Lieske said.

"Not only are these poorer countries already affected disproportionately by stillbirth, they're now going to be disproportionately affected by climate change as well.

"If the link apparent in this research bears out upon further scrutiny, the majority of new stillbirths will occur invariably in the nations already suffering the most."

Professor Vicki Flenady, Director of the Centre of Research Excellence in Stillbirth (Stillbirth CRE) at Mater Research, said the research highlighted the importance of research to reduce global stillbirth rates.

"Even in 2021, a stillbirth occurs somewhere in the world every 16 seconds," Professor Flenady said.

"Stillbirth has a traumatic long-lasting impact on women and their families, who often endure profound psychological suffering as well as stigma, even in high-income countries.

"Here in Australia, stillbirth is still a major public health problem.

"As outlined in my recent research, in 2015 Australia's late gestation stillbirth rate was over 30 percent higher than that of the best-performing countries globally.

"Further work is needed to understand the role that temperature plays in keeping women and babies safe during pregnancy.

"To fully understand the effects of maternal exposure to ambient temperatures and stillbirth, future studies should focus on the biological mechanisms involved and contributing factors, in addition to improving measurement of ambient temperature exposure.

"In the meantime, we would encourage pregnant women to talk to their healthcare providers about staying safe during the cold days of winter and hot days of summer."

The research is published in *Environmental Research*.

More information: Jessica Sexton et al, Systematic review of ambient temperature exposure during pregnancy and stillbirth: Methods and evidence, *Environmental Research* (2021).
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