# Article information:

Estimation of stillbirths attributable to ambient fine particles in 137 countries | Nature Communications
<https://www.nature.com/articles/s41467-022-34250-4>

# Article summary:

1. Exposure to fine particulate matter (PM2.5) during pregnancy is associated with an increased risk of stillbirth, according to a study analyzing 46,319 cases of gestation linked to 13,870 mothers from 1998 to 2016 in low- and middle-income countries.

2. The study found that each 10 μg/m3 increment in PM2.5 was associated with an 11% increased risk of stillbirth, and advanced maternal age significantly enhanced the PM2.5-stillbirth association.

3. Combining exposure-response curves derived from the study with state-of-the-art estimates on the population at risk, PM2.5 concentration, and baseline risk, the study evaluated the number of stillbirths attributable to PM2.5 exposure in 137 countries from 2000 to 2019.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article "Estimation of stillbirths attributable to ambient fine particles in 137 countries" published in Nature Communications highlights the association between gestational exposure to fine particulate matter (PM2.5) and stillbirths. The study aims to present an assessment of the burden of PM2.5-related stillbirth, using exposure-response curves derived from a self-matched case-control method developed by the authors.

The article provides a comprehensive overview of the issue of stillbirth, which is considered a neglected tragedy by the United Nations. The authors highlight that progress in stillbirth prevention has slowed, particularly in low- and middle-income countries (LMICs), where most stillbirths occur. The economic costs of stillbirth are also discussed, affecting individuals, healthcare systems, and society.

The study establishes an exposure-response curve for PM2.5 and stillbirth based on large-population data from LMICs. However, there are some potential biases and limitations to consider. For instance, the study relies on observational data, which cannot establish causality definitively. Additionally, the study only considers PM2.5 as a risk factor for stillbirth and does not account for other potential factors such as maternal health or lifestyle.

Furthermore, while the article acknowledges that there is significant heterogeneity in PM2.5-stillbirth associations between studies due to differential susceptibility according to demographic characteristics such as maternal age, it does not explore potential confounding factors that may affect this relationship further.

The article also presents some unsupported claims regarding the benefits of preventing stillbirth intervention promoting maternal health and sex equality without providing evidence or exploring counterarguments.

Overall, while the article provides valuable insights into the association between PM2.5 exposure and stillbirths globally, it is essential to consider its limitations and potential biases when interpreting its findings fully.

# Topics for further research:

* Maternal health and stillbirth prevention interventions
* Other potential risk factors for stillbirths
* Differential susceptibility to PM
* 5 exposure and stillbirths
* Confounding factors in PM
* 5-stillbirth associations
* Economic costs of stillbirths in LMICs
* United Nations' efforts to address stillbirths globally

# Report location:

<https://www.fullpicture.app/item/b0ac14966c3851b384709bc9aa6ec0a7>