

Study finds air purifiers may benefit fetal growth

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A new study led by SFU health sciences researchers Prabjit Barn and Ryan Allen reveals fetal growth may improve if pregnant women use portable air purifiers inside their homes.

The study, a first of its kind, was conducted in Ulaanbaatar, Mongolia,

which is one of the most polluted cities in the world and has fine particulate matter (PM_{2.5}) levels more than seven times higher than WHO guidelines. Fine particulate matter is the pollutant most consistently linked with human health effects.

The researchers recruited more than 500 women early on in their pregnancies and placed high-efficiency particulate arresting (HEPA) [air purifiers](#) in half of the women's homes. The air purifiers decreased [fine particulate matter](#) in the women's homes by 29 per cent.

"We found that [pregnant women](#) who used HEPA air purifiers inside their homes gave birth to babies that weighed 85 grams more on average at term than women who did not use air cleaners during pregnancy," says Barn.

The researchers say that these results provide further evidence that air pollution exposure during pregnancy has a negative impact on [fetal growth](#) and that reducing exposures can be beneficial.

The study was published in *Environment International*.

More information: Prabjit Barn et al. The effect of portable HEPA filter air cleaner use during pregnancy on fetal growth: The UGAAR randomized controlled trial, *Environment International* (2018). [DOI: 10.1016/j.envint.2018.08.036](#)

Provided by Simon Fraser University

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