

Bad air pollution days tied to longer pediatric asthma hospitalizations

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Ambient particulate and ozone pollution is associated with longer

hospital stays for pediatric asthma, according to a study published online June 13 in the *Journal of Asthma*.

Jennifer Hardell, from the Albert Einstein College of Medicine in Bronx, New York, and colleagues estimated the effect of ambient air pollution on pediatric asthma length of stay. The analysis included 1,920 children admitted to the hospital in Bronx, New York, due to asthma from 2017 to 2019.

The researchers found that mean length of stay varied by age, sex, [weight status](#), influenza vaccination status, respiratory viral panel results, asthma controller use, and asthma classification. After controlling for other factors, the mean length of stay increased up to 10.62 percent for an increase of 10 $\mu\text{g}/\text{m}^3$ of fine particulate matter exposure on admission day and 3.90 percent for an increase of 10 parts per billion per volume of ozone concentration during the previous day.

"Ambient particulate and [ozone pollution](#) is associated with lengthier hospital stays for [pediatric asthma](#), potentially indicating more severe asthma exacerbations," the authors write. "Although the effect is small, this highlights how air pollution may have a direct, measurable effect on health and [health care costs](#)."

More information: Jennifer Hardell et al, Childhood asthma in the Bronx, NY; the impact of pollutants on length of hospital stay, *Journal of Asthma* (2023). [DOI: 10.1080/02770903.2023.2225607](https://doi.org/10.1080/02770903.2023.2225607)

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