

Ambient particulate matter linked to emergency asthma care

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(HealthDay)—Ambient particulate matter concentrations are associated

with emergency/urgent care visits among individuals with asthma, according to a study published in the Aug. 1 issue of the *Annals of the American Thoracic Society*.

Katherine A. James, Ph.D., from the University of Colorado in Denver, and colleagues assessed the impact of ambient particulate [matter](#) concentrations on emergency/urgent visits and hospitalizations for asthma. Daily ambient particulate matter concentrations were obtained from the state health department for an air quality monitor in the San Luis Valley (in the state of Colorado) for 2003 to 2012. The correlation between daily counts of emergency/urgent visits for asthma and three- to five-day averaged ambient particulate matter concentrations were examined.

The researchers observed a 3.1 percent increase in hospital counts for all patients with asthma for each $15\text{-}\mu\text{g}/\text{m}^3$ increase in three-day averaged ambient particulate matter. Asthma hospital visits increased by 16.8 and 65.8 percent when the three-day average exceeded $50\text{ }\mu\text{g}/\text{m}^3$ and $100\text{ }\mu\text{g}/\text{m}^3$, respectively. In children, with each $15\text{-}\mu\text{g}/\text{m}^3$ increase in three-day averaged ambient particulate matter, the odds of one [asthma](#) event requiring an emergency/urgent care visit increased 5 percent.

"We observed associations between ambient air levels of particulate matter with a diameter less than 10 mm and [emergency/urgent](#) care visits and hospitalization counts in a rural U.S. community prone to dust storms and Environmental Protection Agency exceedances," the authors write.

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