

Fine particle air pollution linked with poor kidney health

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People living in areas with higher levels of air pollution faced higher risks of developing kidney disease in a recent study. The findings appear in an upcoming issue of *CJASN*.

It's known that breathing in [air pollution](#) can have detrimental health effects beyond the lungs, but few studies have shown how it impacts the kidneys, which act as filters for the blood.

To investigate, Matthew F. Blum, MD (Johns Hopkins University School of Medicine) and his colleagues examined information on 10,997 adults across 4 sites in the United States who were followed from 1996-1998 through 2016. The researchers estimated the monthly average levels of tiny particles of air pollution—called fine particulate matter—based on participants' home addresses. Fine particulate matter comes from a variety of sources including fossil fuel combustion, [industrial processes](#), and natural sources.

The team found that exposure to higher amounts of fine particulate matter was associated with a higher degree of albuminuria—a marker of kidney

dysfunction—at the start of the study as well as a higher risk of developing [chronic kidney disease](#) over time.

"As rates of chronic kidney disease rise worldwide, it is important to understand whether and how exposure to air pollution plays a role," said Dr. Blum.

The authors noted that their findings may be especially important for parts of the world with higher air pollution, such as China and India, where [fine particulate matter](#) levels are 5 to 10 times higher than in the United States. Future studies should examine whether efforts to improve air quality yield health benefits, including reducing rates of chronic [kidney disease](#).

More information: "Particulate Matter and Albuminuria, Glomerular Filtration Rate, and Incident CKD," [DOI: 10.2215/CJN.08350719](https://doi.org/10.2215/CJN.08350719)

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