

# Air pollution linked to increased rates of kidney disease

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While air pollution is known to cause respiratory and cardiovascular diseases, a new study indicates that it also likely causes damage to the kidneys. The findings, which appear in an upcoming issue of the *Journal of the American Society of Nephrology (JASN)*, call for attention on the role of air pollution in the development of kidney disease in urban areas.

Air pollution has become a serious problem in many cities in China, but the extent of its impact on individuals' health is unclear. To examine how particulate matter in the air is affecting kidney health, a team led by Fan Fan Hou, MD, PhD and Xin Xu, MD, PhD (Southern Medical University, in Guangzhou, China) analyzed data on kidney biopsies taken over 11 years from 71,151 patients from 938 hospitals in 282 cities across China, encompassing all age groups.

On average, the likelihood of developing membranous nephropathy, an immune disorder of the kidneys that can lead to kidney failure, increased 13% annually over the 11-year study period, whereas the proportions of other major [kidney](#) conditions remained stable. Regions with high levels of fine particulate [air pollution](#) had the highest rates of membranous nephropathy.

"Our primary finding is that the frequency of membranous nephropathy has doubled over the last decade in China. We show that the increase corresponds closely with the regional distribution of particulate air pollution," said Dr. Hou.

**More information:** "Long-Term Exposure to Air Pollution and Increased Risk of Membranous Nephropathy in China," *JASN*, June 30, 2016, [DOI: 10.1681/ASN.2016010093](https://doi.org/10.1681/ASN.2016010093)

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