

# Air pollution associated with higher rates of chronic kidney disease

November 15 2014

---

Air pollution may play a role in the development of kidney disease, according to a study that will be presented at ASN Kidney Week 2014 November 11-16 at the Pennsylvania Convention Center in Philadelphia, PA.

There are wide variances in the prevalence of chronic [kidney disease](#) (CKD) across the United States, only part of which is explained by differences in individuals' risk factors. To see if air quality may also play a role, Jennifer Bragg-Gresham, PhD (University of Michigan) and her colleagues looked at 2010 Medicare information on 1.1 million persons as well as air-quality data for all US counties provide by the Environmental Protection Agency.

The investigators found a link between the prevalence of CKD and the county level of particulate matter, even after taking into account patient [risk factors](#) for CKD including age, diabetes, and hypertension. An elevated prevalence of CKD was observed when particulate matter levels were as low as 8.4  $\mu\text{g}/\text{m}^3$ , which is much lower than levels typically considered unhealthy for sensitive groups such as the elderly ( $\sim 40 \mu\text{g}/\text{m}^3$ ).

"If [air pollution](#) is a risk factor for CKD, the impact is likely to be even greater in countries where pollution levels are much higher than in the U.S. Future investigations should include lab-based diagnosis of CKD, longitudinal data, measures of multiple air pollutants and individual exposure, and more extensive control of confounding factors," said Dr.

Bragg-Gresham.

**More information:** Study: "County-level Air Quality and the Prevalence of Diagnosed Chronic Kidney Disease in the U.S. Medicare Population" (Abstract SA-PO802)

Provided by American Society of Nephrology

Citation: Air pollution associated with higher rates of chronic kidney disease (2014, November 15) retrieved 21 June 2024 from <https://medicalxpress.com/news/2014-11-air-pollution-higher-chronic-kidney.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.