

# Volatile organic compound exposure tied to higher risk of overactive bladder

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High exposure to volatile organic compounds (VOCs) is independently and positively associated with overactive bladder (OAB) risk, according to a study [published](#) in *Frontiers in Public Health*.

Dawen Zhang, from the Fifth People's Hospital of Wujiang District in

Suzhou, China, and colleagues investigated the relationship between blood VOCs and OAB risk. Analysis included data from 11,183 participants in the U.S. National Health and Nutrition Examination Survey (2007 to 2020).

The researchers found that when adjusting for potential confounders, blood 2,5-dimethylfuran (adjusted odds ratio [aOR], 2.940), benzene (aOR, 1.460), and furan (aOR, 9.426) were positively independently associated with the risk of OAB in a dose-response manner. Exposure to mixed blood VOCs heightened risk of OAB (OR, 1.29), with furans having the greatest weight. OAB was more susceptible to blood VOCs in young and middle-aged, male, nonhypertensive, and alcohol-drinking populations.

"The concentration association between blood 2,5-dimethylfuran, [benzene](#), and furan and OAB risk suggests that long-term exposure to VOCs may lead to an increased risk of OAB," the authors write. "More prospective and experimental studies are needed to further validate the conclusions of this study and explore the pathological mechanisms."

**More information:** Dawen Zhang et al, The exposure to volatile organic compounds associate positively with overactive bladder risk in U.S. adults: a cross-sectional study of 2007–2020 NHANES, *Frontiers in Public Health* (2024). [DOI: 10.3389/fpubh.2024.1374959](https://doi.org/10.3389/fpubh.2024.1374959)

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