

# Study shows that children at home did not prompt parents to test for radon, secondhand smoke

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A University of Louisville School of Nursing researcher has found that the presence of children in the home did not motivate parents to test and mitigate for radon and secondhand tobacco smoke, both of which cause lung cancer. The findings highlight a need to raise awareness on these exposure risks and their long-term impact on children.

Luz Huntington-Moskos, Ph.D., R.N., C.P.N., UofL School of Nursing assistant professor, recently published the findings in the journal *Public Health Nursing*. The two-year study was funded by a \$210,000 supplemental grant from the National Institute of Environmental Health Sciences as part of a broader study led by University of Kentucky College of Nursing Professor Ellen Hahn, Ph.D., R.N., F.A.A.N.

Hahn's study Freedom from Radon Exposure and Smoking in the Home (FRESH) Dual Home Screening for Lung Cancer Prevention gave about 550 participants test kits to measure radon and secondhand smoke levels in their homes. Based on the test results, participants received tailored interventions designed to reduce environmental risks for lung cancer.

Huntington-Moskos analyzed data collected from Hahn's study, focusing on whether parents with children 18 and younger living in the [home](#) were concerned about lung cancer risk and the dangerous combination of radon and secondhand smoke.

"This was an opportunity to see if parents are thinking about their child's long-term exposure to radon and secondhand smoke in the home," Huntington-Moskos said. "We found that having children present in the home doesn't appear to impact parents' lung cancer worry."

Radon, a naturally occurring radioactive gas resulting from the breakdown of uranium in the soil, enters homes and other buildings through small cracks and holes in the foundation and can become trapped indoors. Radon and [tobacco smoke](#) have synergistic effects that greatly increase the likelihood of lung cancer.

Increasing awareness on preventing exposure to radon and tobacco smoke is especially critical in Kentucky, which has the highest incidence of [lung cancer](#) in the country, according to the Centers for Disease Control

and Prevention. The state's geology also allows for strong concentrations of radon to release from the ground.

"In Kentucky, we have a significant amount of karst geology, which is great because it gives the state beautiful caves to enjoy, but it also sets up an environment where [radon gas](#) can be trapped and then funneled through the ground," Huntington-Moskos said. "We need to think about the structure of our homes. Even among neighbors in the same community, there can be homes with different levels of radon due to different foundations or building materials. Therefore, everyone should make an effort to test their home."

Inexpensive radon test kits can be bought at home improvement stores. Installing a ventilation system, which can be done by a certified radon professional, can mitigate unsafe levels of [radon](#).

**More information:** Luz Huntington-Moskos et al, Radon, Secondhand

Smoke, and Children in the Home: Creating a Teachable Moment for Lung Cancer Prevention, *Public Health Nursing* (2016). DOI: [10.1111/phn.12283](https://doi.org/10.1111/phn.12283)

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