

Radon & Secondhand Smoke Exposure in Pets



UNDERSTANDING THE RISKS

RADON

- Radon is a naturally occurring radioactive gas and the 2nd leading cause of lung cancer in humans.^{1,9}
- Most exposure to radon occurs in the home. The only way to know if a home has a radon problem is to test for it.^{1,13}
- All homes should be tested for radon and fixed when radon is ≥ 4.0 pCi/L.¹³



PETS & RADON

- Lung cancer incidence in dogs & cats is approximately 2-fold higher in areas with high radon potential.⁵
- Like children, pets have smaller lungs & breathe faster than adult humans. Thus, they may receive a higher dose of radiation from radon.⁶
- Co-exposure to radon and tobacco smoke increases lung cancer risk.⁹
- Emphysema and fibrosis are more prevalent and severe in dogs exposed to SHS and radon.^{3,4}



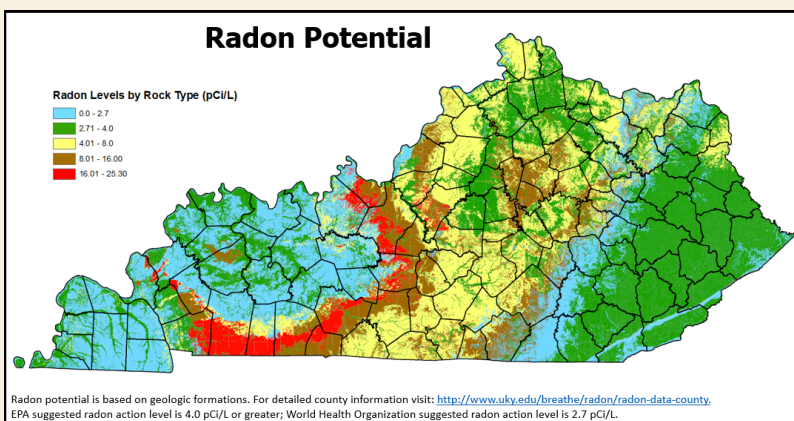
SECONDHAND SMOKE (SHS)

- SHS is a mixture of smoke exhaled by the smoker and smoke from the burning end of tobacco products.
- Cigarette smoke contains >7,000 chemicals; 69 are known carcinogens.²
- Pet owners are motivated to create smoke-free homes for their pet's health.⁸

PETS & SHS

- Respiratory cells of dogs with chronic bronchitis exhibit DNA damage from SHS.¹⁵
- Exposure to SHS is a risk factor for lymphomas in dogs and cats.^{3,10}
- Excessive SHS exposure results in pulmonary emphysema, fibrosis, and chronic bronchitis & bronchiolitis in dogs.⁴
- Medium- to longer-length nosed animals may be at higher risk of nasal cancer from SHS.^{11,12}
- SHS may exacerbate chronic cough in dogs with respiratory disease.¹⁴

ARE PETS AT RISK IN KENTUCKY?



Nearly 1/4 of Kentucky adults report current tobacco use.⁷

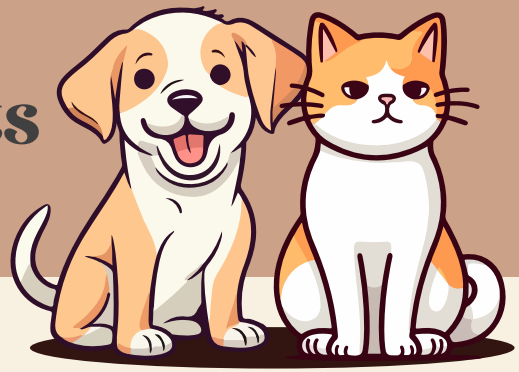
YES!

Pets rely on humans to protect them! Informing pet owners of the risks of radon and SHS exposure may motivate owners to make their homes radon- and smoke-free.⁸



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VETERINARIANS CAN HELP!



ENCOURAGE PET OWNERS TO TAKE ACTION!

- **Educate** pet owners about the dangers of radon and SHS.
- **Test** your own home for radon and tell others to do so as well.
- **Advise** owners to fix their home if radon is at or above 4.0 pCi/L.
- **Assess** for SHS exposure in the home. If present, **advise** owners on creating a smoke- and radon-free home.



TESTING FOR RADON

- **Assist** owners in obtaining a FREE radon test kit:
<https://states.aelabs.com/#/ky>

FIXING RADON

- Certified radon mitigation professionals are required to lower radon levels inside homes and buildings.
- These professionals are licensed by the state of Kentucky.
- You can find a licensed professional here:
<https://nrpp.info/pro-search/>

TOBACCO CESSATION

- 1-800-QUIT-NOW
- <https://smokefree.gov>

CHECK OUT THESE RESOURCES!

- American Lung Association. Radon Testing. <https://www.lung.org/clean-air/at-home/indoor-air-pollutants/radon>
- BREATHE. Radon Data by County and Statewide. University of Kentucky College of Nursing. <https://breathe.uky.edu/radon/radon-data-county-and-statewide>
- Centers for Disease Control and Prevention. Protect Yourself and Your Family from Radon. <https://www.cdc.gov/radon/index.html>
- KMOV St. Louis (2024, April 28). Pets, like humans, susceptible to Radon dangers [Video]. <https://www.youtube.com/watch?v=lfqYJq40NTO>
- U.S. Department of Health and Human Services. A Citizen's Guide to Radon: The Guide to Protecting Yourself and Your Family from Radon. https://www.epa.gov/sites/default/files/2016-12/documents/2016_a_citizens_guide_to_radon.pdf
- U.S. Department of Health and Human Services. Radon and Cancer. <https://www.cancer.gov/about-cancer/causes-prevention/risk/substances/radon/radon-fact-sheet>
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