DIRECT FROM CDC ENVIRONMENTAL HEALTH SERVICES

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Radon Outreach: Helping People See an Invisible Risk

Editor's Note: The National Environmental Health Association strives to provide up-to-date and relevant information on environmental health and to build partnerships in the profession. In pursuit of these goals, we feature this column on environmental health services from the Centers for Disease Control and Prevention (CDC) in every issue of the *Journal*.

In these columns, authors from CDC's Water, Food, and Environmental Health Services Branch, as well as guest authors, will share tools, resources, and guidance for environmental health practitioners. The conclusions in these columns are those of the author(s) and do not necessarily represent the official position of CDC.

Caitlyn Lutfy is a health communication specialist and lead for radon communication efforts. Dr. Adela Salame-Alfie is a health physicist and subject matter expert on radon. Carol McCurley is a lead health educator. All are part of the Radiation Studies Section within the National Center for Environmental Health at CDC.

Radon is the second leading cause of lung cancer in the U.S. after smoking (U.S. Environmental Protection Agency, 2022a). Lung cancer deaths attributable to radon are preventable through testing and mitigation. Yet there is a lack of awareness and understanding about radon, its risks, and how to prevent radon-associated lung cancer (Vogeltanz-Holm & Schwartz, 2018). The Centers for Disease Control and Prevention (CDC) is working to help build awareness and understanding and to encourage preventative actions among the general public, as well as clinicians. Recent efforts include new communication materials and establishing an annual Radon Awareness Week during the last week of January.

Radon Basics

Radon is an odorless and invisible radioactive gas released from rocks, soil, and water. Radon can get into homes or buildings through small cracks or holes in foundations and walls, and can build up to unsafe levels. Over time, breathing in high radon levels can cause lung cancer.

Any home or building can have cancer-causing levels of radon in it, regardless of where it is located or whether it is new or old, drafty or sealed, or does or does not have a basement. The U.S. Environmental Protection Agency (2022b) estimates that 1 in 15 homes have high radon levels.

A Risk Communication Challenge

The good news is that exposure to high levels of radon is easily preventable. If people know the risks and how to test, and if necessary, reduce radon levels in their homes, they can reduce their risk of developing lung cancer. Homeowners, anyone buying or selling a home or making renovations, and renters can call their state radon office for information and resources in their area, including a list of qualified radon testers and mitigators. Renters also can work with their property owners to encourage testing. Radon test kits are also available at hardware stores. If testing reveals that a home has dangerous levels of radon above 4 pCi/L, installation of a radon reduction system can reduce radon to safer levels.

The bad news is there is a lack of awareness and concern among most people about radon. Many people do not know about radon, its risks, how to test for it, and how to keep radon levels low at home (Ou et al., 2019; Rosenthal, 2011). Even among those who do, because radon is not a visible threat and its risks are not immediate, it is easy to delay radon prevention and control measures. This situation makes radon a risk communication challenge.

Raising Awareness

CDC works to raise awareness about radon to encourage more people to take action to test for and reduce radon levels in their homes. CDC's newly updated radon website includes

FIGURE **1**

The Centers for Disease Control and Prevention Will Sponsor Its Third Annual Radon Awareness Week in January 2023

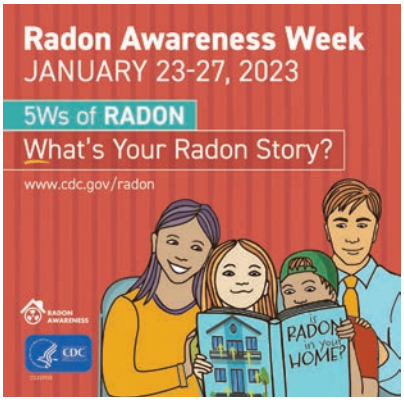

FIGURE **2**

Example of the Different Action-Based Themes for Each Day of Radon Awareness Week

easy-to-navigate information on radon, testing, and reduction, as well as information and targeted resources for healthcare providers and a library of communication tools.

Radon Awareness Week

January is National Radon Action Month. CDC sponsors Radon Awareness Week during the last week in January to bolster outreach activities and promote new communication products and tools (Figure 1). The National Center for Environmental Health within CDC leads a collaborative effort with a wide range of public health partners to provide education on radon risks. In 2022, Radon Awareness Week was kicked off with an Environmental Health Nexus Webinar (www.cdc.gov/nceh/ehsp/ehnexus/learn/2022/ehnexus_webinar_01242022.htm) that featured subject matter experts Dr. Adela Salame-Alfie from CDC's Radiation Studies Section, Dr. Thomas Golden from CDC's Office on Smoking and Health, and Dr. Bill Field from the University of Iowa.

Each day of Radon Awareness Week had a different theme, downloadable graphic (Figure 2), and social media messages that partners could use to expand their reach. CDC also sent out daily theme-based newsletters and social media through its channels.

FIGURE **3**

Screenshot From the Video Testimonial of Jackie's Story

Engagement Through Videos

To help encourage the public to learn more about radon, CDC developed animations and videos. A 3-D animation available in English and Spanish summarizes basic information about radon and an animated graphic shows how radon gets into the home. To help these messages resonate with more people and draw the attention of healthcare providers, CDC launched a testimonial video (Figure 3) and blog post featuring a lung cancer survivor and her pulmonologist. The video features Jackie Nixon who had never smoked and learned about high radon levels in her home after being diagnosed with lung cancer. Nixon is now the communication and marketing director for Citizens for Radioactive Radon Reduction.

Ongoing Collaboration

CDC is active on the Leadership Committee of the National Radon Action Plan (NRAP). NRAP is led by the American Lung Association and is a 12-member public–private work group with members including the U.S. Environmental Protection Agency, U.S. Department of Housing and Urban Development, and partners representing health, radiation, energy, cancer, and radon industry science experts. Along with developing the recently updated *National Radon Action Plan 2021–2025*, CDC is engaged in ongoing efforts to meet the plan's goals and to continue to educate the public and healthcare providers. NRAP is in the process of developing a communication resource portal for states and partners to share communication products and tools vetted by NRAP members.

Additional Resources

- Radon website: A collection of resources on how to protect yourself and your family from radon (www.cdc.gov/radon)
- Radon Communication Materials webpage: A collection of videos, graphics, fact sheets, and other outreach resources (www.cdc.gov/radon/communications/index.htm)
- Radon Awareness Week webpage: Updated each year with the themes and activities for the week and downloadable graphics and social media messages (www.cdc.gov/radon/awareness.html)
- Radon: Protect Yourself and Your Family: A short, 3-D animated video with basic information on radon and how to test for and reduce radon in your home (https://youtu.be/ts16okWUrCo)
- How Radon Gets Into Your Home: An animated graphic that demonstrates the ways that radon can enter a home (https://bit.ly/32rZtkU)
- Jackie's Story: A video of lung cancer survivor and radon outreach activist, Jackie Nixon, and her pulmonologist, Dr. Maley (https://youtu.be/bXI0sFaS4S8)
- National Radon Action Plan webpage: A collection of resources related to the National Radon Action Plan that includes the current plan, past progress, and a list of National Radon Action Workgroup members (www.epa.gov/radon/national-radon-action-plan-strategy-saving-lives)

Radon can affect anyone and is an environmental, housing and construction, and health issue. Collaboration between partners and agencies allows information to reach more people and ensures that concerns about radon are addressed from multiple angles.

Links to the resources mentioned in this column can be found in the sidebar. For more information and resources on radon and to be a part of Radon Awareness Week 2023, sign up for the Radiation and Health newsletter at https://tools.cdc.gov/campaignproxyservice/subscriptions.aspx?topic_id=USCDC_118.

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