

In Highlighting Radon's Risks, Context Needed

by Jon Hamilton

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In case you haven't heard, it's National Radon Action Month.

Every January, the Environmental Protection Agency and other federal agencies hit the airwaves to tell us that radon gas can kill and that every home should be tested. But that message skips over many complexities surrounding the risks from radon.

Radon is a heavy, radioactive gas that can seep out of the soil into basements and other parts of a house. There's no question that inhaling a lot of radon is bad for you, but some scientists think such statements could use a little context.

Phil Price, a physicist at Lawrence Berkeley National Laboratory in California, has spent a lot of time studying radon. He is willing to accept the government's rough estimate that radon causes about 21,000 deaths from lung cancer each year. But, he says, people should know something about that number.

"A large fraction of those estimated deaths are thought to be among smokers," he says. "One way to think of it is it's just one of the things that goes along with smoking, is that it increases your chance of radon-related lung cancer."

The EPA estimates that among people who have never smoked, radon accounts for fewer than 3,000 radon deaths each year. The huge difference in risk is because smoking and radon appear to have a powerful synergy when it comes to lung cancer.

Price says that piece of information has important implications.

"If you want to reduce the number of radon-induced lung cancer deaths in the country, one thing you could do is reduce radon for everybody," he says. "A better thing would be to reduce radon just for the smokers maybe, because they're the ones with the largest risk from radon. But of course you'd do even better by getting them to stop smoking."

Price also takes issue with the message that radon can be found all over the U.S. and in any type of building, including homes, offices and schools.

It's true, of course. But Price says the message tends to gloss over the huge role played by geography.

"If you live in the Louisiana bayou, there's a lot better ways to spend even a small amount of time and money to reduce your risk of premature death than doing a radon test," he says.

That's because very, very few homes in that part of the country have high levels of radon. Meanwhile, in parts of the Midwest, many homes have worrisome levels.

Then there's the question of how much radon is too much.

"If tests show 4 or more picocuries of air, simple, effective and nonexpensive action should be taken to reduce the level of radon," one PSA says.

There has been a lot of discussion about the EPA's so-called "action level" of 4 picocuries.

Bill Field, an environmental scientist who studies radon at the University of Iowa, says early information about radon risk came from research on miners exposed to high levels of the gas while working underground. These miners also smoked and breathed in a lot of things besides radon.

So Field and other scientists began studying regular people in Iowa. And their study suggested that the EPA's action level — 4 or more picocuries of air — is too high.

Field says the target should be perhaps half that level.

"By everyone in the Unites States going down to 4 picocuries per liter, we're only eliminating about one-third of the radon-induced lung cancers," he says.

Field says his study confirmed that the risk from radon is lower among nonsmokers. But he says a lower risk doesn't mean no risk.

Oh, by the way, lowering radon levels usually means drawing air from beneath your house and venting it outside. The cost is usually between \$1,000 and \$2,000.