

## Radon As News: Challenging Fundamental News Concepts?

*prepared by Bud Ward, Executive Director  
Environmental Health Center, National Safety Council  
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Finding a cure for cancer would be big news. That's easy. Even a cure for some cancers would make banner headlines.

But when it comes to cancer *prevention*, as in avoiding radon-induced lung cancers, the story is different. In this context, radon flaunts the notion that an ounce of prevention is worth a pound of cure. As a news story, radon indeed challenges many of the fundamental concepts involved in the journalism riddle "What is news?"

Rutgers University Environmental Communications Professor Peter Sandman recites a dozen factors involving how citizens and the media perceive environmental health risks. Collectively, they almost spell-out a challenge to the press's approach to what constitutes news when it comes to public health. Collectively, too, they help explain why many feel radon-induced lung cancers are among the most under-reported cancer risks.

As for challenging fundamental news precepts, consider a few of the factors Sandman cites:

*There is no villain.* No one *puts* radon into the environment. No industry emits or releases or spills radon into the environment. Radon occurs naturally in most soils and rocks. It enters individual homes and buildings through cracks and fissures common to many structures. Those cracks and fissures are the "fault" of no one in particular.

*There is no "victim."* You can't point to a lung cancer victim and conclude that radon was the cause of death. Cancer deaths come with no "Radon-Induced" label. Radon's lethal effects are chronic rather than acute, they show up as lung cancer only after decades. In those cases, showing a cause-and-effect relationship is impossible.

*There is usually no immediate emergency, and "control" of the problem rests with the individual.* In most cases, there's no additional cancer risk from radon by waiting a day or a week or more before reducing the radon concentrations in one's environment. The risk here is controlled not by some outside force upon whom pressures can be brought, but rather by the individual. Call it human nature: Because the timing is up to the individual, the problem often goes unaddressed. "I can do it tomorrow, so I won't do it today . . . ."

*The threat is unseen and unfelt, and the risk occurs in that most unlikely and most trusted of places . . . at home.* Radon is invisible. People can't see, taste, or smell it. It doesn't repulse them physically or offend their senses. Rather, it lurks silently in the background, working its mischief only after years of exposure. And it does so often in that haven where people feel most safe . . . the home. That fact creates a psychological barrier against seeing a familiar situation as a risky one.

From a journalistic standpoint, the irony is that the radon health risk issue has arisen at a time when much of the public feels powerless to address and manage many of the environmental health risks they perceive as harming them the most. And yet here is one that they can control. Although radon is the nation's second leading cause of dreaded lung cancer, informed citizens have the wherewithal to assess and, if necessary, reduce their own exposure risks easily and usually inexpensively. They can do so without incurring large capital expenses and without enduring difficult life-style changes, such as reducing use of their cars to combat urban smog.

### **Should Radon's Differences Make It LESS Newsworthy?**

Radon doesn't fit the usual mold.

For journalists, one might think that would make it inherently interesting, man bites dog and all that.

But it doesn't seem to work that way. In fact, one could argue that the very things that make radon and its associated health effects different from other environmental problems also make them somehow *less* newsworthy. Particularly given the health risks associated with radon exposures, it's a situation that should give environmental journalists pause.

Consider some of the factors that set radon apart from other environmental pollutants.

For one, radon is a radioactive gas which occurs naturally as a result of the radioactive breakdown, or decay, of uranium and radium in the soil. That means there is not the usual "villain" associated with putting the pollutant there in the first place. It also means there is no identifiable "deep pockets" on which to fix blame or assess penalties, no institutional greed that might be tied to some variation of midnight dumping.

The pernicious effects of prolonged radon exposures are well-documented, documented in fact through extensive radiation and human health studies, and not dependent on ambiguous extrapolations from rats or mice to humans. At the same time, the effects -- specifically the increased chances of incurring lung cancer -- are manifested only after prolonged exposures and after long latency periods. Radon-induced lung cancers don't appear over night, but rather over time.

That means there is a lot of time, and a lot of complex variables, before radon-induced lung cancers take hold.

Radon is different in other ways that set it sharply at odds with the conventional environmental health problems symbolized, for example, by an oozing 55-gallon drum. Unlike the pervasive effects of urban smog or contaminated aquifers, radon poses personal risks which individuals themselves can reliably

detect and measure. If you are at risk of increased lung cancer in your home because of excessive radon concentrations, it's not terribly hard for you . . . or your readers or viewers . . . to find that out. Measuring radon concentrations in one's living environment and then determining, based on those measurements, whether the associated risks are "acceptable" is something within the reach of pretty much all of us.

It's not terribly expensive, and not at all time-consuming or complex. For \$10 or so, most of us can get an early indication of whether our homes might harbor radon concentrations that would justify further analysis or, possibly, fix-up efforts. The situation stands in stark contrast to the kinds of enormous societal costs associated, for instance, with clean-up of hazardous waste sites or with meeting health-based air quality standards in smog-ridden urban areas.

Humans can't taste, smell, or see radon, but this isn't one of those cases where what you don't know can't hurt you. It can. In fact, as discussed earlier, radon exposures account for more incidences of lung cancer than any other cause except cigarette smoking, according to the U.S. Surgeon General's office. Given that lung cancers have an overall fatality rate of 54.1/100,000 population, the public health benefits of reducing radon exposures are clear.

While the risks posed by high radon concentrations constitute the "bad news," the "good news" lies in the fact that those risks can be controlled -- controlled without imposing huge costs or life-style changes along the lines of reducing personal car use or shifting to alternative fuel supplies.

The media come in for their share of criticism for "loving villains." And there's no question that a good villain can make for good news copy.

At the same time, however, the public and the media also love a good hero. What makes the radon story so enticing and so juicy from a reporter's standpoint is not only that it involves a significant public health issue -- "one of today's most serious public health issues," according to Dr. Vernon J. Houk, Assistant Surgeon General of the U.S. Public Health Service -- but also that the individual risks are manageable and controllable, once the risk is detected.

Another important element in a good story is evidence. In the case of radon-induced lung cancers, the scientific evidence is as strong as any in the environmental health field. "From all the evidence, radon in the home is the most deadly environmental hazard in America today," says Robert E. Yuhnke, a radon specialist with the Environmental Defense Fund (EDF), a national environmental organization.

Evidence? What evidence? It turns out that as long ago as the sixteenth century, radon-induced lung cancers are believed to have plagued miners in Central Europe. Notwithstanding some uncertainty about the precise levels of health risk posed by different radon concentrations and exposures, public health specialists point out that radon risk estimates are based on scientific studies of human beings exposed to radon in their underground mining jobs. That obviates the need to rely on frequently more uncertain extrapolations from animal tests, although such tests only reinforce concerns raised from human data.

In the case of radon, more research over time has led to more consensus. Studies done by the U.S. Public Health Service in the 1960s pointed to a strong correlation between lung cancer and American underground workers exposed at high radon levels. American miners exposed to lower radon exposures suffered less lung cancer.

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