



# What's Lurking in Your Countertop?

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SHORTLY before Lynn Sugarman of Teaneck, N.J., bought her summer home in Lake George, N.Y., two years ago, a routine inspection revealed it had elevated levels of radon, a radioactive gas that can cause lung [cancer](#). So she called a radon measurement and mitigation technician to find the source.



Tony Cenicola/The New York Times

**TESTING** Reports of granite emitting high levels of radon and radiation are increasing.

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Nathaniel Brooks for The New York Times

**DETECTION** Using devices like the Geiger counter and the radiation detection instrument Stanley Liebert measures the radiation and radon emanating from granite like that in Lynn Sugarman's kitchen counters.

"He went from room to room," said Dr. Sugarman, a pediatrician. But he stopped in his tracks in the kitchen, which had richly grained cream, brown and burgundy granite countertops. His Geiger counter indicated that the granite was emitting radiation at levels 10 times higher than those he had measured elsewhere in the house.

"My first thought was, my pregnant daughter was coming for the weekend," Dr. Sugarman said. When the technician told her to keep her daughter several feet from the countertops just to be safe, she said, "I had them ripped out that very day," and sent to the state Department of Health for analysis. The granite, it turned out, contained high levels of uranium, which is not only radioactive but releases radon gas as it decays. "The health risk to me and my family was probably small," Dr. Sugarman said, "but I felt it was an unnecessary risk."

As the popularity of granite countertops has grown in the last decade — demand for them has increased tenfold, according to the Marble Institute of America, a trade group representing granite fabricators — so have the types of granite available. For example, one source, [Graniteland.com](#) offers more than 900 kinds of granite from 63 countries. And with increased sales volume and variety, there have been more reports of "hot" or potentially hazardous countertops, particularly among the more exotic and striated varieties from Brazil and

Namibia.

"It's not that all granite is dangerous," said Stanley Liebert, the quality assurance

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director at CMT Laboratories in Clifton Park, N.Y., who took radiation measurements at Dr. Sugarman's house. "But I've seen a few that might heat up your Cheerios a little."

Allegations that granite countertops may emit dangerous levels of radon and radiation have been raised periodically over the past decade, mostly by makers and distributors of competing countertop materials. The Marble Institute of America has said such claims are "ludicrous" because although granite is known to contain uranium and other radioactive materials like thorium and potassium, the amounts in countertops are not enough to pose a health threat.

Indeed, health physicists and radiation experts agree that most granite countertops emit radiation and radon at extremely low levels. They say these emissions are insignificant compared with so-called background radiation that is constantly raining down from outer space or seeping up from the earth's crust, not to mention emanating from manmade sources like X-rays, luminous watches and smoke detectors.

But with increasing regularity in recent months, the [Environmental Protection Agency](#) has been receiving calls from radon inspectors as well as from concerned homeowners about granite countertops with radiation measurements several times above background levels. "We've been hearing from people all over the country concerned about high readings," said Lou Witt, a program analyst with the agency's Indoor Environments Division.


Last month, Suzanne Zick, who lives in Magnolia, Tex., a small town northwest of Houston, called the E.P.A. and her state's health department to find out what she should do about the salmon-colored granite she had installed in her foyer a year and a half ago. A geology instructor at a community college, she realized belatedly that it could contain radioactive material and had it tested. The technician sent her a report indicating that the granite was emitting low to moderately high levels of both radon and radiation, depending on where along the stone the measurement was taken.

"I don't really know what the numbers are telling me about my risk," Ms. Zick said. "I don't want to tear it out, but I don't want cancer either."

The E.P.A. recommends taking action if radon gas levels in the home exceeds 4 picocuries per liter of air (a measure of radioactive emission); about the same risk for cancer as [smoking](#) a half a pack of [cigarettes](#) per day. In Dr. Sugarman's kitchen, the readings were 100 picocuries per liter. In her basement, where radon readings are expected to be higher because the gas usually seeps into homes from decaying uranium underground, the readings were 6 picocuries per liter.

The average person is subjected to radiation from natural and manmade sources at an annual level of 360 millirem (a measure of energy absorbed by the body), according to government agencies like the E.P.A. and the [Nuclear Regulatory Commission](#). The limit of additional exposure set by the commission for people living near nuclear reactors is 100 millirem per year. To put this in perspective, passengers get 3 millirem of cosmic radiation on a flight from New York to Los Angeles.

A "hot" granite countertop like Dr. Sugarman's might add a fraction of a millirem per hour and that is if you were a few inches from it or touching it the entire time.



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