

## Home-environment expert unsure about Wi-Fi impact

Tom Sharpe | The New Mexican

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In more than a decade of testing buildings for mold, chemicals, pollutants and electromagnetic fields, Daniel Stih of Santa Fe says he's never encountered a hypochondriac.

"When I say hypochondriac, keep in mind that doesn't mean stress can't be making you sick," he said. "There's lots of studies that say sick-building syndrome can be caused by stress."

Stih, author of *Healthy Living Spaces: Top 10 Hazards Affecting Your Health*, says people around the world who believe health is impacted by radio-frequency signals are watching how Santa Fe handles the issue. "They're like, 'Finally, somebody said something.' "

After getting a degree in aerospace engineering, Stih went to work for Motorola in Phoenix as the first claims were being made about cell phones causing brain cancer. He said the company hired a researcher who found so many problems with cell phones that he published a book about the dangers.

Nevertheless, Stih said, Motorola was able to spin the issue so that the dangers were downplayed.

"When I started out, I had a real open mind about it," he said. "I thought, 'We're not evil. We wouldn't do that.' ... But an engineer goes around the facility investigating, and it's amazing what really goes on."

Motorola spokeswoman Tama McWhinney disputed Stih's assertions: "All Motorola mobile phones and other wireless products are designed, tested and manufactured to meet national and international safety guidelines for radio-frequency (RF) energy exposure. These standards provide wide margins of safety for users and the general public. Numerous expert panels and government organizations around the world, including the World Health Organization, have consistently concluded that RF products that meet these safety standards pose no known health risk."

After leaving Motorola, Stih began taking courses in "green building" at Prescott College, where he learned about mold, gasoline, roofing tar and pesticides. After he began to work as an indoor environmental consultant, he said, clients asked about electromagnetic issues, so he took courses from the Building Biology and Ecology Learning Center.

The center, founded in Germany as the Institute for Bau-Biologie et Ecology, is based in Lyles, Tenn., near Nashville. Its executive director, Michael Conn, works remotely from his home in Truchas. Some 30 years ago, the center began studying the health effects of electromagnetic fields from power lines, electric blankets and faulty house wiring.

Vicki Warren, an electrical engineer, began teaching the center's online course on "electrosmog" from wireless signals three years ago. In an interview, she quickly dismissed studies that say wireless is safe.

"The only studies that actually make that claim are studies that are paid for by the telecommunications industry," she said. "The studies that are done by people not associated with the telecommunications all support the opposite — that there are biological risks involved with the use of this communication system."

Warren said studies that show cell phones don't emit enough energy to cause a rise in temperature to exposed tissue are conducted with a direct line of sight between the phone and the antenna. "Once you take your cell phone inside a car, inside a home or create distance between you and the antenna, then your cell phone actually exceeds the industry's set standards," she said.

Another hazard, she said, involves the digital signals on the body's cells. Warren said these high frequencies cause cell membranes to go into lockdown, preventing the intake of nutrients and the expulsion of waste, damaging DNA and creating "the precursor to tumors."

Warren cited other studies that link behavior problems to wireless signals:

- u A Japanese study of subway riders found that more arguments and fights have broken out since cell phones have been allowed in subway tunnels.

- u Since U.S. airplane passengers have been allowed use their cell phones while waiting to deplane, more arguments have been noted in the first few minutes after landing.

- u Cognitive abilities were reduced 20 percent in Japanese fourth-graders after talking on cell phones for 30 minutes.

McWhinney of Motorola disputed Warren's assertions.

"Fixed equipment that transmits RF energy, such as base stations, antenna sites or wireless access points, are covered by exposure guidelines based on the same scientific knowledge as the limits applied to RF portable products," she said in an e-mail. "Generally, due to the height of antennas, fixed network equipment produces RF exposure levels that are typically hundreds or even thousands of times below safe exposure limits. When installing new communications infrastructure, Motorola works with our customers to ensure compliance based on existing RF safety guidelines and standards."

McWhinney sent along a list of three dozen institutions in Canada, China, Japan, Russia, the U.S. and countries in the European Union that Motorola has funded for research into the potential health effects of RF fields.

Los Alamos National Laboratory's public-information office was unable to find any lab staff who wanted to dispute or support claims by wireless opponents. A theoretical biologist and biophysicist at the lab, Bill Bruno, has been among anti-wireless advocates at Santa Fe public meetings.

Workshops organized in 2008 by the National Research Council of the National Academies at the request of the Food and Drug Administration of the U.S. Department of Health and Human Services found gaps in research into potential adverse effects of RF energy on humans.

The International Commission on Non-Ionizing Radiation Protection in 2009 said that scientific literature has "provided no evidence of any adverse effects ... (of) exposure to high frequency electromagnetic fields."

Stih, who moved to Santa Fe about five years ago and has not been active in the local anti-wireless movement, said he is convinced that many common household items present hidden dangers — mercury in compact fluorescent bulbs, chemicals in air freshener and even tiny leaks of natural gas. But he said he is still learning about the effects of wireless signals.

"My personal experience is more anecdotal .... versus some kind of study," he said. "I'm actually going out to people's houses looking for mold, chemicals, mouse droppings, plague, whatever. They're complaining about not feeling good and I'm ruling everything else out ... because what if I'm missing something and it's not what they think it is? All I can say doing this: I am amazed at the number of people who appear to be bothered by this."

Stih said people may go for years without reacting to electromagnetic fields, then suddenly reach a tipping point where they become hypersensitive.

"What happens if you or I become the next Wi-Fi-sensitive person?" he asked. "I see it all the time with mold people — people who end up being sensitive to mold. Macho contractors say, 'Mold is no big deal. I'm not worried about that mold.' Next thing you know, their lives are ruined. They just have one bad incident. One bad day."

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Daniel Stih says he's never run into a 'true hypochondriac' in more than a decade of testing homes and businesses for mold, pollutants and strong electromagnetic signals that could be causing illness. While he's still not sure about the health impacts of wireless technology, he's concerned that overexposure could lead to hypersensitivity. Daniel Stih uses a German-made Spectran HF-6080 to analyze and electromagnetic fields in area homes