

# What do we know—and not know—about fracking?

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Fracking is in the headlines a lot these days, and everyone has an opinion about it. But how much do we really know for certain about the oil and gas extraction technique and its health effects? And how do we find out the truth among all the shouted opinions? To help cut through the static, several scientists have put together a multidisciplinary session on fracking and health at the meeting of The Geological Society of America (GSA) in Denver on Sunday.

"There is so much perceived information on [fracking](#) in the media, with so little of it based on real science and actual data," says Thomas Darrah, a medical geologist at Ohio State University and one of the conveners of the GSA Pardee Keynote Session, "Energy and Health: The Emergence of Medical Geology in Response to the Shale Gas Boom."

"Fracking has moved so quickly, and the research community is playing catch up on water, air, and [health](#) issues," said Robert Jackson, an environmental scientist at Duke University who will present his research this Sunday. "The goal is to present a state of the science for researchers and the public."

The afternoon keynote session is designed to cover a lot of ground. It will start with the geologists, hydrologists, and air-quality experts who are studying the chemistry and the physical properties of fracking in the ground, water, and air. Then the session veers into territory not often covered at a geological meeting, with talks by toxicologists, researchers in occupational medicine, and epidemiologists.

"This session includes people who would normally not be anywhere near a GSA conference," said Darrah. "The idea is that we end the session by having the geoscience community interact with a group of people who are looking at health data sets: epidemiologists. That way we can put people working on the other end of the equation in the same room." Included in the eleven scheduled presentations, and at the medical end of the equation, is a talk titled "Public Health Implications of Hydraulic Fracturing," by David O. Carpenter of the University of Albany's School of Public Health, and another, "Energy and Health: The Emergence of Medical Geology in Response to the Shale Gas Boom: An Occupational and Environmental Medicine Perspective," to be delivered by Theodore F. Them of Guthrie Clinic Ltd.

For his part, Darrah will be presenting a talk about his work, "Understanding In-House Exposures to Natural Gas and Metal-Rich Aerosols from Groundwater within an Unconventional Energy Basin."

There are two additional presentations on the air-quality issues of fracking, which is perhaps the topic the public knows the least about. Gabrielle Petron of the University of Colorado and NOAA will be talking about outdoor air emissions from [hydraulic fracturing](#) activities, and [public health](#) researcher Lisa M. Mackenzie of the University of Colorado will talk about work evaluating specific health risks from exposure to [natural gas](#) drilling in Garfield County, Colorado.

**More information:** [gsa.confex.com/gsa/2013AM/webp...am/Session33316.html](http://gsa.confex.com/gsa/2013AM/webp...am/Session33316.html)

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