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Study cites asbestos impact

UCD research is seen as start to understanding rocks' cancer risk.

By Carrie Peyton Dahlberg -- Bee Staff Writer
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People who live near the kind of rocks that can contain asbestos are more likely than other Californians to contract a rare cancer, according to a study being published in the nation's leading respiratory medical journal.

The study by University of California, Davis, and Harvard University researchers has been eagerly awaited by federal officials trying to understand possible links between the rocks beneath our feet and asbestos-related diseases.

It could be "a huge part of the puzzle," said Dan Meer, one of several EPA officials who had heard the study's results described at public meetings.

Still, they and others characterized the work as only a start toward a better understanding of the possible dangers of weathering, digging or other dust-releasing activity in asbestos belts.

In studies like this, "interpretation is always a little bit delicate," said Michel Camus, a University of Montreal associate professor whose past work has suggested U.S. risk models may overstate some asbestos dangers.

While the new study is both "eye-opening" and "disturbing," he said, it's still likely that the environment is responsible for only a very small proportion of mesothelioma cases in North America.

The study could hold special interest for foothills communities, including El Dorado Hills, where elevated levels of asbestos fibers have been measured in the air around joggers, bicyclists and others pursuing dust-raising activities. It's still unclear whether people are breathing in enough of those fibers to become ill, and if so, how much of an upsurge that might create in an already uncommon cancer.

Workplace exposure to asbestos can cause a sometimes fatal disease, asbestosis, along with lung cancer and mesothelioma, the swiftly lethal tumor of cells lining the chest and other cavities.

Experts estimate that mesothelioma strikes just one or two people in a million every year in the United States.

Even so, it's often a focal point in tracing asbestos' effects because, unlike lung cancer, it doesn't have a number of other widely established causes, and, unlike asbestosis, very large exposures aren't needed to trigger disease.

Mesothelioma was the disease tracked in the new, peer-reviewed study awaiting publication in the American Journal of Respiratory and Critical Care Medicine and quietly posted online by the journal late last week.

The research team concluded that the risk of getting mesothelioma appeared to decline by 6.3 percent for every 10 kilometers farther away someone lived from possible asbestos veins.

"It seems unlikely to be due to chance," said Laurel Beckett, an expert in biostatistics at the UC Davis School of Medicine and one of the study's co-authors.

The apparent geographic component of the disease is "much weaker" than its well-known occupational causes, Beckett added, making it clear that more work is needed to probe just what's behind the numbers.

The study stressed that for the purposes of this analysis, researchers made a number of assumptions that have potential flaws. For example, they used the last job held to estimate roughly how great someone's workplace exposure to asbestos might have been, but they didn't have full work records.

They used each person's address at the time of diagnosis to determine possible proximity to asbestos, but they didn't have records for how long the person might have lived there or where else he or she had lived.

And since there is no map showing where all the asbestos in California lies, researchers used state maps of "ultramafic" rock, where veins of asbestos often form. It too is an imperfect indicator; large swaths of ultramafic rock are likely to be asbestos-free, and the fibrous mineral also can be found in other rocks.

Researchers drew their conclusions from reviewing nearly 3,000 cases of mesothelioma that were reported to the state's cancer registry as being diagnosed between 1988 and 1997.

For comparison, they looked at the same number of pancreatic cancer cases drawn from the registry, matched for age and gender and diagnosis date. The pancreatic cancers were not more common closer to ultramafic rock, but the mesotheliomas were.

Interestingly, the distance needed to make a difference was relatively small. "Ten (kilometers) is about 6.2 miles," said Beckett. "That says that if you were standing on top of an asbestos rock and started running, your risk would drop as soon as you ran the first 10K race."

The medical journal's online posting put study authors in an awkward position, because some had been advised that talking to reporters before the print publication, expected in September, could result in the article's being yanked, said Claudia Morain, spokeswoman for the UC Davis cancer center.

The warning hadn't reached Beckett but did forestall comment from senior author Dr. Marc Schenker, chairman of the medical school's department of public health sciences.

The bind left some key issues unclear, including underlying estimates of how likely mesothelioma was found to be overall in different locations.

Those familiar with the issues stress that knowledge about environmental causes of disease builds up slowly, study by study, as each new finding brings investigators a little closer to the truth.

Dr. John Balmes, head of the Northern California Center for Occupational and Environmental Health, called the new paper "important enough to get into the best pulmonary journal," but added, "I don't think it's a landmark."

Balmes, a specialist in lung and environmental diseases who teaches at both UC Berkeley and UC San Francisco's medical school, said that on their own, studies like this one don't prove anything. Instead, they raise important questions that call for more work. This study will make "an incremental contribution" to figuring how out safe - or unsafe - it is to live near asbestos-bearing rock.

That assessment was shared by the federal Environmental Protection Agency. Today, the only federal standards for asbestos were designed to limit workplace exposure, said Lisa Fasano, a spokeswoman for the EPA's San Francisco office.

"There was never a standard developed for people living near naturally occurring asbestos," she said. "We need to continue to collect more information like this so we can finally make a determination on possible risks to residents."

Schenker has said his study was inspired by a 1998 investigation by The Bee that raised health questions about asbestos dust from dirt roads and construction sites in the foothills.

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