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## Asbestos worries widen in foothills

**Common recreational activities can sharply raise exposure, new EPA results show.**

**By Chris Bowman -- Bee Staff Writer**

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The U.S. Environmental Protection Agency has found that everyday recreation at El Dorado Hills' busiest park and nearby schools can significantly elevate exposure to a particularly toxic kind of asbestos, according to air test results obtained by The Bee.

Simply bicycling the nature trail through Community Park, the recreational hub of the family-oriented foothills community, can kick up the naturally occurring asbestos fibers in concentrations as much as 43 times higher than if there were no activity in the area, the EPA tests showed.

Playing baseball can elevate the asbestos level 22 times.

The hazardous exposure can be raised multiple times even for those too small to swing a bat or ride a bike. Air samplers at the toddlers' playground measured a tenfold increase in asbestos concentration as EPA technicians played on the jungle gym and bounced balls.

Not even pavement was a safe harbor. Playing basketball increased the airborne asbestos concentrations three to four times at Jackson Elementary and Rolling Hills Middle School, the data showed. The outdoor courts apparently were covered with the invisible fibers, deposited by wind or the soles of sneakers, EPA officials said.

The EPA playgrounds study, scheduled for release today, is the first in seven years of foothills asbestos investigations to show that the threat is not limited to the obvious.

The studies stem from a 1998 Sacramento Bee investigation that found home builders and gravel miners in fast-developing western El Dorado County creating a potential public health hazard by digging into asbestos veins and leaving the fibrous minerals exposed. Tests commissioned by The Bee found high concentrations of a particularly hazardous kind of asbestos in settled dust inside homes and in the dust raised by traffic on rural roads graveled with serpentine, a native rock that hosts the asbestos.

But the new data suggest the danger extends to areas where there are no telltale signs, to neighborhood schools, parks, and even homes.

EPA officials said they found no visible signs of asbestos in the rock outcrops at Community Park, yet relatively high concentrations of the mineral showed up in air samples wherever EPA technicians kicked up dust.

The study also breaks ground by tying the asbestos hazard not to disturbances from bulldozers and graders, but to the individual activities of children and adults.

County and state air pollution regulators have adopted measures to reduce exposure to asbestos released by development, such as wetting down construction sites to keep the minerals' invisible fibers from going airborne.

But results from the playgrounds air tests suggest the protective strategies must be broader and applied to everyday activities: knowing, for example, what's in your neighborhood soil when planting gardens or installing backyard pools; learning when and where to use leaf blowers; re-routing the morning jog to avoid dust.

"The business interests, the schools, the community service providers, the county government and the public all need to get involved in how to address this issue," said Dan Meer, a top EPA official who supervised the study.

"It's similar to living in earthquake country," Meer said. "There are certain things government does and certain things individuals do, and they all come together to try to reduce the risk."

For many in El Dorado Hills, population 31,000, the reports of toxic contamination in their midst have seemed unreal or overblown. The community, after all, is home to gracious homes with views of Folsom Lake and the Sierra, not factories and railyards.

But by quantifying the asbestos exposures in the community's green belts, the EPA report makes the geologic hazard more difficult to discount. It also gives the community the kinds of information needed to devise precautions.

The threat at Community Park, frequented by hundreds of children daily, could be abated significantly, for example, by replacing tainted dirt in the baseball diamonds with clean fill or wetting the infields more often, Meer said.

Asbestos was found in almost all of the more than 400 air samples taken from Oct. 1 through Oct. 11 at the park and schools, Meer said.

The levels were "significantly elevated" in every testing scenario where test crews ran, bicycled and played sports, even under relatively wet conditions that EPA officials had thought would do more to suppress the fibers, Meer said.

The main public health concern related to such exposures is mesothelioma, an inoperable and almost always fatal cancer of the membranes lining the chest and other body cavities, according to Marc Schenker, an international authority on the disease at the UC Davis School of Medicine.

Short exposure - months, not years - can be enough to instigate the disease, though it typically takes 30 or more years before the cancer takes hold, Schenker said. That means children are especially at risk because of their long life expectancy, he said.

Scientists are not sure exactly how non-occupational asbestos exposures such as those in the foothills translate into health risks.

But they know the risk of contracting an asbestos-related disease is tied to exposure, and that the risk increases with the level, frequency and duration of that exposure.

EPA officials said it's up to residents and their government representatives to decide whether and how to further protect the community. But they stressed that something must be done.

"Reasonable and appropriate steps should be taken, and that's going to take an effort by the entire community," Meer said.

The EPA plans to present its findings to the public at 7 p.m. Friday at the Community Park gymnasium, 1021 Harvard Way.

At the same meeting, officials with the federal Agency for Toxic Substances and Disease Registry plan to present a report on the health risks from asbestos exposure at Oak Ridge High School, which is across the street from the park.

Both agencies also plan to have representatives available for questions from 10 a.m. to 2 p.m. Saturday at the gym.

EPA officials said they mailed the report of the findings Friday to more than 8,000 area residents and officials. They plan to post the report today on the home page of the agency's San Francisco

regional office: [www.epa.gov/region09/](http://www.epa.gov/region09/). Agency officials provided The Bee an advance copy of the findings for publication today.

Last month, EPA staff privately briefed county and local school officials on the results and offered general recommendations for mitigating the public's asbestos exposure, Meer said. Suggestions included increased inspections and tougher enforcement of dust controls at construction sites and more public education about naturally occurring asbestos.

But the study doesn't answer nagging questions: Exactly how do the exposures affect human health? How much is too much?

Risk-assessment experts said the tools they commonly use to predict risk of disease from toxic substances don't work for exposure to asbestos in the general environment.

Those models assume regular, everyday exposures over a 70-year lifetime, typically on a job. In the foothills, exposures to asbestos generally are brief and intermittent, as when a Little Leaguer slides into home at the El Dorado Hills park.

Also, the model is based on a less toxic form of asbestos than the one predominantly found in the foothills study, EPA scientists said.

The asbestos fibers identified were mainly amphibole, specifically tremolite and actinolite, test results show. Most lung disease experts consider amphibole asbestos significantly more potent than the commercially used chrysotile fibers in causing mesothelioma.

The EPA is assembling a panel of independent experts to help the agency better assess the risk.

But public health experts interviewed by The Bee said the uncertainties should not keep the community from taking precautions.

"There is no known safe threshold for asbestos, so why knowingly put your kids in a place known to have an elevated risk of exposure," said Jerrold Abraham, a pathologist at the State University of New York's College of Medicine in Syracuse who has investigated diseases from exposure to tremolite.

"For public health, you are supposed to err on the side of caution," Abraham said.

Some residents already have taken steps.

Vicki Summers, who lives in a large custom-built home in El Dorado Hills, said she has been surfing the Internet and calling environmental officials for advice.

She recently started requiring family and visitors to remove their shoes at the door to prevent them from tracking in asbestos fibers. She plans to remove carpeting because vacuuming can re-suspend fibers. And she has switched from vacuuming to mopping hardwood floors to avoid churning up fibers into the air.

Still, Summers said she worries whether she's doing enough to keep her family safe.

"So do I throw my mop away after every cleanup?" she asked. "What kind of mop should I use?"

Wayne Lowery, manager of Community Park, said he, too, has questions.

Upon learning of the test results last month, Lowery said he immediately halted the use of leaf blowers in the park and got estimates on black-topping New York Creek Nature Trail, which winds two miles through the densely residential heart of El Dorado Hills.

But Lowery said the EPA doesn't know to what extent asbestos was blown into the park over the years from neighboring construction, a problem that could be repeated.

"I hate to spend a lot of the public money on something that doesn't fix the problem," Lowery said.

Jon Morgan, the county's chief environmental enforcer, had a different reaction to the EPA news.

Morgan, who oversees asbestos dust-control laws for the county, slammed the EPA's study as sloppy and alarmist given uncertainties about the actual health risks from this type of exposure.

He issued a press release in late March warning that the test results "may scare the daylight out of every man, woman and child in western El Dorado County." And he advised residents to tune in to his cable TV presentation on the asbestos hazard.

"To be more informed, watch the Foothill 7 production of Comcast television throughout the month of April for an interview with Jon Morgan," the release said.

However, Abraham, Schenker and two other university experts on asbestos who have followed the foothills studies and independently reviewed the EPA's work for The Bee said the agency's methods of sampling and laboratory analysis appeared solid.

"All in all, I am impressed with the professionalism and clear-headedness of the EPA presentation," said Bruce Case, a pathologist and epidemiologist at McGill University in Montreal, Quebec, who has investigated health effects from asbestos mining.

"The most important thing folks like EPA and ATSDR can do is to provide people with the information they need to make informed choices, and although they have not always done so in the past years, they do seem to be taking the current situation you have quite seriously."

The EPA is the third public health agency since early April to complete a study of the foothills hazard.

The state Department of Toxic Substances Control on April 8 released a study showing that traffic on rural roads covered with asbestos-containing gravel significantly raises the exposure for residents living within at least 300 feet. The agency advised residents to pave the serpentine-gravel roads and driveways.

Two weeks ago, The Bee reported that the federal ATSDR found that those who played or coached sports or tended fields at Oak Ridge High School likely face an elevated risk of mesothelioma.

These findings prompted the U.S. Senate Judiciary Committee last week to approve \$40 million to help communities nationwide identify areas with naturally occurring asbestos and develop protection strategies.

The EPA launched the playgrounds study last year at the request of a resident who suspected the asbestos veins found on the high school grounds also would be found across the street at Community Park.

The results are based on readings from personal air monitors worn by EPA technicians as they mimicked children's activities at the park and three nearby schools: Silva Valley Elementary, Jackson Elementary and Rolling Hills Middle School.

Scientists say the activity-based personal air sampling is a relatively new and technically superior method for assessing exposure to the amphibole fibers.

Earlier tests by state officials involving stationary samplers at dozens of sites in western El Dorado and Placer counties detected hardly any of these fibers.

But by strapping monitors directly on technicians engaged in dust-raising activities, the EPA captured significant concentrations of the amphibole fibers at levels that varied according to how much the technicians were churning up the soil.

EPA technicians, wearing respirators and protective outfits, conducted scripted two-hour simulations of children playing baseball, basketball, four square, even hopscotch. They wore air samplers at the 3-foot-high breathing zone for children and the 5-foot-high zone for adults.

Results were compared with readings from stationary "reference" samplers in areas nearby but uninfluenced by the dust-raising activities.

EPA officials said they will not be conducting further foothills asbestos investigations or cleanups

such as the agency did last summer at Oak Ridge High.

"We really think it's up to the communities now to decide what protective measures to take," Meer said. "Local officials are going to have to take the lead."

### Public forums

\* The EPA will hold a public meeting on its findings at 7 p.m. Friday at the Community Park gymnasium, 1021 Harvard Way.

\* At the same meeting, the federal Agency for Toxic Substances and Disease Registry will present a report on the health risks from asbestos exposure at Oak Ridge High School.

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