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Doctor's study disputes risk in arsenic-treated wood playgrounds

Stafford Township's recent decision to dismantle Planet Playground due to concerns about the high arsenic levels at the site has brought attention to the controversial health issue.

Not all researchers agree the playgrounds pose a threat.

Stafford joins dozens of towns across the country that closed community playgrounds since consumer and environmental advocates began lobbying for a ban on copper chromium arsenate-treated wood in 2001.

The groups gained momentum and press attention following the release of a number of independent studies linking arsenic to cancer.

The Environmental Protection Agency has not concluded that CCA-treated wood poses any unreasonable risk to the public or the environment, according to the agency's Web site. But it has concluded that arsenic is a known human carcinogen and says that any reduction in the levels of exposure to arsenic is desirable.

The EPA placed a ban on CCA-treated wood in 2003 but has never advised that existing structures built with the wood be dismantled.

Studies conflict on whether the amount of arsenic exposure for children playing on playgrounds built with CCA-treated wood is significant enough to increase cancer risks.

An independent study done last year at the University of California Davis by a child oncologist contradicts other popular studies and claims that playing on CCA treated playgrounds has not increased cancer rates at all.

Daniel C. West is the child oncologist who conducted the study. He said that as a doctor who sees cancer-stricken children every day, he is always looking for cancer risks to warn parents about. He came to the conclusion after his study that CCA is not a cancer risk.

West's study compared arsenic-related cancers in 20-to-29 year olds exposed to CCA-treated playgrounds as children, to 30-39 year olds never exposed to CCA. He studied all cases of arsenic-

linked cancers listed in the National Cancer Registry for those age groups.

The chemical was not widely used to treat wood structures until the late 1970s.

The study found that the number of these types of cancers among the CCA-exposed group was lower than the number of those cancers among people who never played on CCA playgrounds.

West said that in studying the ways that toxic materials affect the human body, there are varying assumptions that caused the vast disparities in studies assessing the risks of CCA for children.

How long and how often children play on playgrounds, and how much arsenic comes off on their hands and goes into their mouths, are both variables that can only be estimated, West says.

That is why he decided to approach his study differently, and look at people in their 20s who actually might have played on CCA-treated playgrounds as children.

Arsenic has a latency period of 20-30 years, and increases chances of developing only two specific cancers; lung and bladder, West said.

"The question for us was, if arsenic exposure from playgrounds increases cancer risks, then why don't we see the increases?"

The Consumer Product Safety Commission the government group which made recommendations on the issue to the EPA in 2003, estimated in their study, that the increased cancer risk ranges from two cases in every million people to 100 in million, or 1 in 10,000.

For comparison, about one out of every 10,000 nonsmokers (0.01 percent) develops lung cancer, according to the American Cancer Society.

So, based on commission estimates, playing on CCA-treated playground equipment might increase someone's lifetime lung-cancer risk from a baseline lifetime risk of 0.01 percent to between 0.0102 to 0.02 percent.

Meanwhile, the EPA strictly regulates the amount of arsenic allowed in public drinking water under the Safe Drinking Water Act.

EPA's Science Advisory Board says that high exposures to arsenic in drinking water - 2,000 micrograms per day and greater - notably increase cancer risks in some people. Children are exposed to about 3.5 micrograms of arsenic per day through playground equipment, according to the safety commission.

Dr. West did his study to cut through all the confusing data and answer the increasing number of questions he was receiving from concerned parents seeking answers.

"This is no crusade on my part. It's a real charged issue and I understand that," he said about towns making the difficult decisions to close playgrounds.

He said he also understands why, armed with only one side of the issue and one source of information, towns must err on the side of caution.

"People are concerned with children, and I live with that as part of my job. If there is something we could do to prevent cancer, we should be doing it. But this (tearing down playgrounds) isn't the thing.

When asked what he would recommend to parents in Stafford and other towns where playgrounds are closed, his answer is simple.

"I would say to instead focus on putting sunscreen on kids while they are playing on these things. Or I would tell parents, don't smoke near them.

"We have proof these things cause cancer."

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