



Workers scrape off the old artificial turf from Lions' Stadium at the College of New Jersey in Ewing after concerns were raised about lead contamination.

By Todd Plitt,
USA TODAY

Artificial turf: Health hazard?

By Michael McCarthy and Steve Berkowitz, USA TODAY

Since the 1960s, artificial turf has been installed on sports fields across the nation, touted as a more durable and cost-effective alternative to grass. Early synthetic surfaces — such as the short-bladed AstroTurf — have given way in recent years to longer-bladed versions designed to be softer and help prevent injuries.

But there are increasing concerns that some synthetic fields — particularly fraying AstroTurf surfaces that have been in place for years — are contaminated with lead and could pose a health hazard to children, athletes and others who use them.

A half-dozen artificial fields in New York and New Jersey as much as a decade old or more have been closed because of concern about high levels of lead in the turf fibers.

The threat of lead contamination in old turf has given a fresh platform to those raising red flags about newer types of artificial turf. These surfaces often include bits of recycled tires — known as "crumb rubber" — among the turf blades to provide a cushioned surface. They have been installed at thousands of schools, public parks and indoor sports facilities across the country, and more are scheduled.

The questions about both types of artificial turf have created ripples nationwide, prompting a federal investigation of artificial surfaces and raising anxiety among health and elected officials, some of whom want to ban new installations until government agencies study the potential health risks and environmental hazards.

"They're in high schools, university stadiums, public parks. So it's a public health issue," says Rep. Rosa DeLauro, D-Conn., who helped prompt the U.S. Environmental Protection Agency to get involved. "It is more than the lead issue. It's the crumb rubber" in the new types of turf.

Says New Jersey Assemblyman John Rooney, "A little foresight is worth a hell of a lot of regret down the road."

The artificial turf industry has been trying to reassure current and prospective customers its products are safe while pointing out the newer generation of turf helps find a use for millions of used tires.

So far, the concern about lead is focused mostly on older, nylon fields built by AstroTurf's former U.S. owner, Southwest Recreational Industries, which went out of business in 2004. During a news conference Monday in New York, the current marketers of AstroTurf said their products and those marketed by Southwest Recreational Industries are safe.

"In the last couple of weeks, the science (showing turf is safe) is being trumped by the perception, the fears, the uncertainty and doubts," said Jon Pritchett, chief executive officer of GeneralSports Venue (GSV), the exclusive licensee for AstroTurf in the USA.

The closed fields include four New Jersey surfaces — in Jersey City, Newark, Hoboken and at the College of New Jersey in Ewing — as well as a high school field in Cicero, N.Y., that were found to contain high levels of lead. Another closed high school field in Liverpool, N.Y. is being tested.

New Jersey health officials discovered the lead, used in pigment to color some fields, in the turf fibers. Kids and athletes could be exposed by inhaling or swallowing lead-laced turf fibers or "dust" kicked up by those playing on the fields, state epidemiologist Eddy Bresnitz says.

There have been no known cases of illness attributed to the fields, but at least four of the closed fields will be torn up and replaced with new artificial surfaces.

Elsewhere, towns have begun limiting access to artificial turf fields by young children, who are most at risk from exposure to lead, which can cause brain damage and even death.

In Montville, N.J., for example, kids under 7 will not be permitted to play on two artificial turf fields that registered unsafe lead levels, pending further testing, township administrator Frank Bastone says.

Children under 6 are "most at risk from exposure to lead," says Dale Kemery of the EPA, which along with the U.S. Consumer Product Safety Commission (CPSC) has launched an investigation of artificial turf fields.

Old turf triggers questions

The original AstroTurf installed at the Astrodome in Houston in 1966 was a hard, carpet-like surface. It quickly spread throughout the NFL and Major League Baseball because it gave multi-use stadiums a consistent playing surface and was easier and cheaper to maintain than grass.

Today, those old rugs have largely fallen by the wayside in stadiums used by professional and college teams. The carpets have been replaced in such arenas by natural grass and newer, more sophisticated types of artificial turf.

However, at some smaller stadiums used by high schools, on playgrounds and other places, old AstroTurf remains.

The newer fields usually are made from polyethylene and polypropylene, plastics commonly used to make everything from grocery bags to food containers, as well as nylon or a mix of materials. The fields mimic the look, feel and footing of natural turf, and they often feature longer strands of plastic "grass" and crumb rubber from recycled car and truck tires. These tiny bits of infill provide a springy cushion for kids and weekend warriors and can be kicked up just like dirt on a natural grass field.

The national investigation by the CPSC and the EPA will focus on all kinds of turf, not just nylon, CPSC spokeswoman Julie Vallese says. The agency already is collecting turf samples and expects to issue a report by early summer. "Our focus is on the risk to exposure from lead," Vallese says.

Meanwhile, the concern over fake turf has triggered efforts by legislators in five states to get studies of potential health and environmental hazards done. Several schools and municipalities nationwide also are testing their fields.

There are 3,500 full-size, artificial fields in the USA, estimates Rick Doyle, president of the Synthetic Turf Council, a trade group. Such turf accounts for 900 to 1,000 installations a year but does not include smaller surfaces such as practice fields and playgrounds.

DeLauro and other officials worry about kids and athletes inhaling or swallowing the small rubber pellets. Environmentalists also have cited the pellets as a concern, questioning whether compounds from recycled tire rubber can run off the turf and pollute rivers, lakes, streams and groundwater.

Some colleges, including Ohio State and Western Carolina, are having their synthetic fields tested.

Separate bills in the New York, New Jersey and California legislatures would ban the installation of new fields until the completion of comprehensive health and environmental studies.

Connecticut Senate Minority Leader John McKinney said Wednesday that he is working with the commissioners of the state's departments of public health and environmental protection to find a way to use existing funds for a study. In New York City, Public Advocate Betsy Gotbaum has called for an "immediate moratorium" on turf installations until the city completes a study on their "adverse" health effects.

Responding to a request from California State Sen. Abel Maldonado, Attorney General Jerry Brown's office says it will study whether signs should be posted near synthetic fields warning that users could be exposed to toxic chemicals. The California Integrated Waste Management Board has told Maldonado it plans to evaluate whether crumb rubber fields release dangerous chemicals — or cause abrasions and bacterial infections more serious than those occurring on a natural surface. A bill by Minnesota State Rep. Phyllis Kahn also calls for a health study on the impacts of crumb rubber use.

Risks overblown, industry says

The artificial turf industry says the controversy is based mostly on scientifically flawed attacks and sensationalized claims of the risks associated with turf. At least one coach agrees that the issue has been blown out of proportion.

"Nobody talks about all the radon in the soil, and there are kids playing on that every day, breathing it in," says Mark Zimmerman, an assistant football coach at McQueen High School in Reno.

One artificial turf maker is changing its manufacturing process to remove potential toxins.

Stephen P. Noe, president and CEO of Sportex Construction Services, which has installed more than 200 full-size fields in the last three years, recently posted a note on the company's website saying "a few colors" of its products "were produced using low levels of lead chromate-based pigments. ... Going forward Sportex will not be offering these heavy metal based color choices. We intend to substitute alternative colors based on non-heavy metal based pigments. ... Although we do not see a health risk in the current products, we believe that this is the best decision for all of our constituents."

GeneralSports Venue owner Michael Dennis says he has a contract to rip up the closed field in Newark and replace it with a new "PureGrass" system with lead-free nylon fibers. The company also will install a lead-free artificial baseball field in the city.

Shira Miller, a spokeswoman for the Synthetic Turf Council, said via e-mail Wednesday that manufacturers have been coming together to share information about standards and, "The STC welcomes the involvement of the Consumer Product Safety Commission, the EPA and other groups since we are confident their scrutiny will answer the question of safety issues once and for all."

FieldTurf Tarkett dominates the artificial turf industry with 1,900 U.S. fields. Ten NFL teams play their home games on the company's products. The Montreal-based company has won the contract to replace the closed field at Hoboken's Frank Sinatra Park. The polyethylene FieldTurf surfaces checked by New Jersey health officials contained trace amounts of lead and were deemed not harmful.

FieldTurf executives are frustrated that their polyethylene products keep getting lumped in with nylon fields built by a company that's no longer in business.

"Our fields were tested and found to be about 50 times below what the U.S. Consumer Product Safety Commission allows in Mr. Potato Head or in Lego," CEO Joe Fields said in a statement.

That's good news, New York state Sen. Jim Alesi says. But he wants more proof before accepting the opinion of manufacturers or industry-paid scientists. "We need to have someone that's not *selling* us the product tell us that it's safe," he says. "If what they're saying is believable, then there's nothing wrong with the old Ronald Reagan approach: trust but verify."

The New York Department of Environmental Conservation has launched a study to "assess the potential environmental impact from crumb rubber as an infill material," spokeswoman Lori O'Connell says.

The upfront costs to install a synthetic field run from \$400,000 to several million dollars. But the fields can last 10 years or more and withstand the kind of non-stop pounding that would turn a natural grass field into dirt.

The operator of at least one of the fields closed recently says he has "no choice" but to replace it with another synthetic surface. Densely populated urban areas have to use artificial fields, says Bob Hurley, director of parks and recreation for Jersey City, which has shut down its 11-year-old AstroTurf field in Cochrane Stadium at Caven Point after finding lead during testing.

The fake grass allows local teams to "play twice as many" football, baseball and soccer games, says Hurley, a well-known high school boys basketball coach at St. Anthony. "If it rains, half an hour later everything has soaked through and we're able to play."

Jeff Tittel, director of the Sierra Club of New Jersey, says public officials and educators should be in the business of protecting children, he says, not squeezing in as many games as possible.

Says New York City's Gotbaum: "If there's no potential long-term or short-term effects that aren't too serious, we'll be the first to get out there and say, 'Hey, it's OK. Everybody get out and play.' I'll be the first person to do that. But I'm not there yet."

Contributing: Tom Ankner; Tehani Schneider and Abbott Koloff of the (Morristown, N.J.) Daily Record; Chris Joyner of The (Jackson, Miss.) Clarion-Ledger; Matthew Daneman of the Rochester (N.Y.) Democrat and Chronicle; Jordan Schrader of the Asheville (N.C.) Citizen-Times; Jeff Martin of the (Sioux Falls, S.D.) Argus Leader; Jeff DeLong of the Reno Gazette-Journal

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ARTIFICIAL TURF PRECAUTIONS

Are the artificial turf fields that you or your kids play on safe? The U.S. Consumer Product Safety Commission and U.S. Environmental Protection Agency have launched an investigation to find out, and they hope to release their findings this summer.

Meanwhile, parents and athletes concerned about lead in such fields can take precautions, say Eddy Bresnitz, deputy commissioner of the New Jersey Department of Health and Senior Services, and Dale Kemery, an EPA spokesman.

- Wash hands, face and body after playing on an artificial turf field.
- Take off clothes worn on synthetic surfaces inside out, then wash separately.
- Field custodians should water the fields before and after they're used to reduce dust raised by heavy play.
- Before having a surface installed, schools and towns should ask vendors to test the turf for potential contaminants in the material, including turf fibers and infill.
- If a field is found to have high lead levels, consider limiting access by the most vulnerable population: children younger than 6.

"EPA recommends that anyone who believes they may have been exposed to hazardous levels of lead should consult with their physician," Kemery says. "Children under age 6 are most at risk from exposure to lead. Consult your doctor for advice on testing your children."

CLOSED FIELDS

Artificial turf fields at six locations in New York or New Jersey have been closed because of possible high levels of lead. Their locations:

- Jersey City: Cochrane Stadium at Caven Point*
- Hoboken, N.J.: Frank Sinatra Park*
- Newark: Ironbound B-Field*
- Ewing, N.J.: Lions' Stadium, College of New Jersey*
- Liverpool (N.Y.) High School**
- Cicero, N.Y.: Michael J. Bragman Stadium, Cicero-North Syracuse High School**

* -- Field being replaced

** -- Pending test results

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