

Making Safe Playgrounds a Priority

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When children are playing at childcare centers, it's expected that minor injuries such as a skinned knee or a bump on the head will occur. What is not expected are the kinds of long-term disabilities that can occur from environmental poisons. Tulane researcher Howard Mielke is not only shining light on the problem of toxins in play yards, but also is trying to mitigate their effect on children.



After discovering high levels of lead in the soil of some New Orleans playgrounds, Tulane research professor Howard Mielke initiated a pilot project to remediate the problem at 11 locations. (Photo by Paula Burch-Celentano)

Mielke and his colleagues have found both lead and arsenic in the soil of certain playgrounds in New Orleans.

Mielke, a research professor with the chemistry department and the [Tulane/Xavier Center for Bioenvironmental Research](#), began by mapping and measuring lead levels across the city. He found high levels of lead on the hands of children at certain daycare centers after outdoor play.

[Mielke](#) and his wife, Tina, then initiated a pilot project to minimize exposure at 11

childcare centers. With funding from the Greater New Orleans Foundation Environmental Fund, his group covered the ground with a geotextile fabric, then laid six inches of clean soil. Mielke says it's a remarkably effective way to eliminate exposure for very little money.

"When compared to the cost of the disabilities that come out of lead — learning disabilities, chronic health problems like diabetes, all sorts of things that create enormous difficulties over a lifetime — the cost-benefit analysis is clear."

Mielke found that the soil near some wooden play structures tested extremely high in arsenic because those structures are made from a certain type of treated wood. According to Mielke, arsenic leaches into the soil from wood treated with chromated copper arsenate.

Mielke says the best way to deal with these play structures is to remove them completely, but another method is to paint the wood and, in either case, replace the soil around the structures.

His goal, he says, is to make the roughly 130 childcare centers across the city safe, so that New Orleans is a "more just and humane place for children."