Icahn School of Medicine at Mount Sinai
Children's Environmental Health Center

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Position Statement on the use of Recycled Tires in Artificial Turf Surfaces

Position: Based upon the presence of known toxic substances in tire rubber and the lack of comprehensive safety studies, The Children's Environmental Health Center of the Icahn School of Medicine at Mount Sinai urges a moratorium on the use artificial turf generated from recycled rubber tires.

Background: Recycled rubber artificial turf products were introduced to athletic fields and playgrounds in the 1990s and have since been installed throughout the world with no prior safety testing. Tires contain heavy metals, carcinogens, and other toxic substances. Grinding them into very small crumb rubber pellets, utilized on athletic fields, or mulch, utilized on playgrounds and gardens, furthers the risk of exposure by increasing the surface area and the likelihood of accidental ingestion. Children are exposed to harmful substances when pellets touch their skin or are swallowed, and possibly from breathing chemicals released into the air from the surface. In addition to crumb rubber infill, artificial athletic turf consists of synthetic grass blades and several layers of backing materials. To date, the safety of these materials has not been proven. While manufacturers claim that a number of scientific studies indicate low risk of harm from recycled tiring playing surfaces, these studies were not conducted in a rigorous manner comprehensive enough to prove safety.

Recommendations: Although we believe that the presence of cancer causing agents and other known toxins in recycled rubber playing surfaces is sufficient reason to mandate the use of safer alternatives, we recognize the need for further scientific study. Prior to the installation of artificial turf fields of any type, studies conducted by independent, academic, or federal research institutions must prove the safety of these products. To be informative, comprehensive studies should consider, at a minimum:

- Exposure assessment under realistic playing conditions.
- All possible routes of exposure: inhalation, ingestion and dermal absorption (through skin).
- Potential health effects not only of individual chemicals, but also of mixtures of chemicals to determine their additive and synergistic effects.

In addition to the above scientific requirements, it is the responsibility of municipalities and installers to assess the opinions and address all concerns of the communities that will be utilizing the fields.

Given mounting concerns about recycled rubber surfaces, several governmental agencies have recently modified their stance on the safety of crumb rubber. On February 12, 2016, the Environmental Protection Agency (EPA), Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry (CDC/ATSDR), and the Consumer Product Safety Commission (CPSC) unveiled the *Federal Research Action Plan on Recycled Tire Crumb Used on Playing Fields and Playgrounds* with the aim of addressing data gaps, characterizing crumb rubber constituents, and assessing exposure pathways. According to the EPA announcement of this collaborative effort, "existing studies do not comprehensively evaluate the concerns about health risks from exposure to tire crumb". The same conclusion was reached by the California Office of Environmental Health Hazard Assessment in 2015, resulting in a commitment to conduct extensive studies that will include exposure assessment and biomonitoring. ***Based on these recent developments we recommend a moratorium on the installation of crumb rubber playing surfaces pending results of these studies.***

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