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Artificial Turf : Environmental & Occupational Disease Epidemiology : NYC DOHMH

Environ. & Occup. Disease Epi.

Artificial Turf Fact Sheet

Artificial turf fields have been installed in many athletic and playing fields throughout New York City (NYC), the United States and the world. This fact sheet provides information on questions often asked about artificial turf fields.

Q: Why is artificial turf used in NYC?

A: Artificial turf fields are used in NYC parks because they have many advantages over grass, dirt and asphalt fields. They:

- provide even playing surfaces
- have padding that helps prevent injuries
- need no watering or mowing
- use no fertilizers or pesticides
- can be used year-round and in all weather
- do not need to be closed to protect or re-sod grass

Q: What is artificial turf?

A: Artificial turf is a man-made surface designed for athletic and playing fields. The artificial turf fields in NYC parks contain several layers, including:

- A bottom layer composed of plastic sheeting.
- Middle layers composed of crushed stones with plastic tubing for drainage and rubber padding for shock absorbance.
- A top layer composed of plastic mesh with soft, flexible plastic grass, and crumb rubber made from recycled rubber tires. Crumb rubber, and sometimes sand, are added to the 'grass' layer to provide extra padding and keep the grass upright.

Q: What materials can be found in the artificial turf crumb rubber?

A: The crumb rubber used in artificial turf is mainly composed of recycled tires, which contain man-made and natural rubber. Certain materials have been identified in the crumb rubber, including:

- polycyclic aromatic hydrocarbons (PAHs)
- metals, such as zinc and iron
- volatile organic compounds (VOCs)
- latex

Q: Can people be exposed to the materials found in crumb rubber?

A: There are three possible ways that people might be exposed:

- *Accidentally ingesting small amounts of material by placing fingers in the mouth or not washing hands before eating after playing on the fields.*
- Breathing in dust created from playing on the field or from vapors given off by the turf.
- Direct skin contact with the crumb rubber.

Q: Are there any health concerns related to crumb rubber exposure?

A: Several scientific research studies carried out in the United States and Europe have examined the chemical composition of crumb rubber. These studies have assessed the potential exposures and health risks for people

using turf fields. Based on these research findings, health risks are unlikely from exposure to the levels of chemicals found in artificial turf. However, there are limitations to these studies and more research is needed.

Q: Can people be exposed to these chemicals from other sources?

A: Many of the chemicals found in crumb rubber are very common in the urban environment. People can be exposed through normal daily activities including breathing air, eating food, and by getting dirt or dust on their skin. For example, rubber dust is created from the wear and tear of tires on roads and is a source of city air and soil pollution. PAHs come from the exhaust of engines, smoke from fires and cigarettes, dust-containing soot, urban soil and char-broiled foods. Gasoline, paint, building materials, trees and many other sources release VOCs into the air.

Q: Do artificial turf fields have heat problems?

A: Artificial turf fields, like asphalt playgrounds, tend to absorb heat from the sun and are hotter than natural grass or dirt fields. On hot days, some artificial turf fields may be too hot to play on. Limiting physical activities, taking rest breaks and drinking plenty of water on hot days will decrease the risk of overheating and dehydration.

Q: What is NYC doing to better understand the potential health effects for people who use artificial turf fields?

A: The NYC Department of Health and Mental Hygiene (DOHMH) is investigating the potential health effects for people who use artificial turf fields by reviewing current scientific research on crumb rubber products, and identifying gaps in what is known about potential health effects. DOHMH is also working with New York State agencies to identify and promote more research assessing exposure to people and potential health and safety risks. Information will be released to the public as it becomes available.

Q: Should people continue to use artificial turf fields?

A: Yes. Regular physical activity is one of the most important parts of a healthy lifestyle. Artificial turf fields allow access to open spaces for sports and physical activities. As with any outdoor activity, it is recommended that after using the fields, people wash their hands before eating or drinking. On hot days, users should take rest breaks and drink water.

Q: Where can I get more information?

A: For more information on artificial turf, please call 311.

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