Navy Environmental and Preventive Medicine Unit 5

Public Health Fact Sheet

Potential Exposure to Lead in Artificial Turf

Synopsis of Events

In the course of conducting a routine health investigation at a metal facility in Newark, NJ, the New Jersey Department of Health and Senior Services (NJDHSS) and the Agency for Toxic Substances and Disease Registry (ATSDR) tested a nearby community artificial turf athletic field for lead contamination. Laboratory analysis of dust samples taken from the field showed relatively high levels of lead. Further investigation determined the lead came from the artificial turf itself and not from the scrap metal facility. Limited sampling of additional athletic fields in New Jersey and commercial products indicates that pigments used in artificial turf made of nylon or nylon/polyethylene blend fibers may contains levels of lead that pose a potential public health concern. Since NJDHHS, CDC and ATSDR did not test fields composed of substances other than nylon and nylon/polyethylene blend, they do not know if lead is also a component in artificial turf made of different materials. Additionally, not all pigments used in turf made of nylon necessarily contain lead.

The Centers for Disease Control and Prevention (CDC) and ATSDR are monitoring the situation. Information provided by NJDHSS to CDC and ATSDR indicates that some of the fields with elevated lead in either dust and/or turf fiber samples were weathered and visibly dusty. Factors such as age of the field, frequency of use, exposure to weather, and how worn, abraded, faded or broken turf fibers are, should be considered when evaluating the potential for harmful lead exposures. The risk is low from new artificial turf since the turf fibers and pigment are undamaged. It should be emphasized that although elevated lead levels were found in the turf tested in New Jersey, no cases of elevated blood lead levels in children have been linked to the use of artificial turf in New Jersey and elsewhere.

How Might I Typically be Exposed to Lead?

- Eating or drinking food or water that has been contaminated by lead.

In general, children less than 6 years old are more likely to be affected by lead than adults because of increased contact with lead sources in the environment, including lead contaminated house dust and soil. Children also absorb lead more easily.

How Can Lead Affect My Health?

Lead can affect almost every organ and system in your body. The main target for lead toxicity is the nervous system, both in adults and children. Long-term exposure of adults can result in decreased performance in some nervous system tests, as well as cause weakness in fingers, wrists, or ankles. Lead exposure can also cause small increases in blood pressure and anemia. Exposure to high lead levels can severely damage the brain and kidneys in adults and children. Children's developing nervous systems are also more susceptible to the adverse health effects of lead including developmental delay and behavioral problems. Concerned parents should talk to their child's pediatrician about potential and known sources of lead in their children's environment and whether their children should have a blood lead test.

General Lead Poisoning Prevention Recommendations

Especially in houses where children are present, parents, day care providers and other child care providers should **follow lead safety practices** regardless of the type of playing surface**.** These practices can help prevent children from being exposed to the many sources of lead in the environment.

1. Wash children's hands frequently and always before they eat.

2. Do not eat food or use pacifiers that have been dropped on the floor or outside.

3. Remove shoes that may have been worn in a lead-contaminated area when entering the house, or use door mats.

References:

http://www.atsdr.cdc.gov/tfacts13.html

http://www.atsdr.cdc.gov/toxprofiles/tp13.html