

Update: New Jersey Investigation of Artificial Turf and Human Health Concerns

August 2008

Background

The NJDHSS found lead in the artificial turf fibers and turf fiber dust at a sports field in Newark, NJ, while investigating a nearby metals scrap yard. In order to find out if lead in turf fibers was common or unique to this field, the NJDHSS conducted a limited (12 fields) investigation of other artificial turf fields in the state. Ten of the fields in the follow-up investigation were made of polyethylene and had very low or undetectable levels of lead in the fibers. The other two fields were made of nylon, as did the field in Newark, and had very high levels of lead in the fibers and dust. There is no standard for lead in artificial turf, so the NJDHSS used the New Jersey Department of Environmental Protection (NJDEP) Residential Direct Contact Soil Cleanup Criteria (RDCSCC) of 400 mg/kg in soil as a basis for determining whether any artificial turf sample had an elevated lead concentration.

No one knew if the lead that was in artificial turf fibers or the dust that forms when those fibers break down from age and weathering could be absorbed by a child or adult who swallows them. In order to find that out, the NJDHSS performed laboratory testing that mimicked the human digestive system. The testing found that lead can leach out of the turf fibers and dust during digestion, and could therefore enter a person's blood.

The NJDHSS also requested that the Consumer Product Safety Commission (CPSC) consider these findings and conduct a larger study of artificial turf for lead. The CPSC did so, and released their findings on July 31.

What did the CPSC find?

The CPSC findings were similar to the NJDHSS findings. The CPSC found elevated lead levels in some artificial turf fibers. It also found, as did the NJDHSS, that as artificial turf fields age the fibers can break down, forming lead dust that was present on field surfaces.



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Are there differences in the two agencies' findings?

The CPSC predicted how much dust a child might swallow, through an assessment that looked at potential exposures to lead dust on artificial turf surfaces. The NJDHSS's laboratory evaluation was done to find out if lead could get out of the fibers and dust, and into the stomach and blood. These findings are more complementary than different.

Has the NJDHSS changed its conclusions about the safety of artificial turf fields that contain lead?

We are pleased that the CPSC has asked the synthetic turf industry to reduce or eliminate non-essential uses of lead in artificial turf products.

NJDHSS believed, and still believes, that lead from the artificial turf fields alone would not result in lead poisoning among children who played on the high lead fields. However, the NJDHSS remains concerned about cumulative lead exposures to children from all lead sources and whether lead from artificial turf, particularly at older, worn fields, adds to those exposures. CPSC's findings confirm that lead from artificial turf can contribute to the overall cumulative lead exposure to children.

Does the NJDHSS have any new recommendations?

No, the NJDHSS continues to recommend that artificial turf field managers and consumers who use residential turf products determine if their product has lead in the fibers. If fields are found to contain lead, the most conservative approach is to limit access to fields that contain lead, especially by children under age 7.

If fields are used, the individuals should perform aggressive hand and body washing after playing on the field, and clothing used on the field should be washed separately. These recommendations are consistent with those of the CPSC.

We are grateful to the CPSC and their involvement in looking at the issue of lead in artificial turf. Presently there are additional studies of artificial turf planned in the future by both state and federal agencies. As only limited information has been available for review, the NJDHSS looks forward to reviewing future reports involving lead in artificial turf before we can make additional informed conclusions and recommendations.