

Federal Government Study on the Use of Recycled Tire Crumbs in Synthetic Turf Fields

Background

Concerns have been raised by the public about the safety of recycled tire crumb rubber used in synthetic turf fields and playgrounds in the United States. In response, the Environmental Protection Agency (EPA), the Centers for Disease Control and Prevention (CDC)/Agency for Toxic Substances and Disease Registry (ATSDR), and the Consumer Product Safety Commission (CPSC) launched a Federal Research Action Plan to study key environmental human health questions associated with using recycled tire crumb rubber on synthetic turf fields.

Studies

EPA and ATSDR are conducting two activities that are part of the Federal Research Action Plan:

1. The tire crumb rubber characterization activity to gather information about synthetic turf field facilities and operations, collect recycled tire crumb rubber infill samples from recycling plants and fields, and analyze the tire crumb samples.
2. The exposure characterization activity to gather data from synthetic turf field users to understand how they use the synthetic turf fields, with a subset of these field users providing samples for analysis, including air, blood, urine, and skin wipe samples.

EPA and ATSDR need field users to participate in the second activity.

Your role as a synthetic turf field user

The purpose of the exposure characterization study is to determine how people might be exposed to chemicals in the tire crumbs on synthetic turf fields. We need synthetic turf field users to:

1. Respond to a questionnaire to provide information about the types of activities performed on these fields.
2. Participate in an exposure measurement study during an athletic or training activity on synthetic field with tire crumb rubber infill.

EPA and ATSDR need up to 60 people who engage in physical activities on synthetic turf fields with tire crumbs to complete a questionnaire about how they use the fields. The questionnaire will ask field users about the types of activities (sports, physical education and training), how much time they spend on fields and how they come in contact with the tire crumbs on the fields.

EPA and ATSDR hope to perform exposure measurements for a smaller group of the people (up to 45) who fill out the questionnaire. The following information and samples will be gathered from people willing to participate:

- Samples during normal activities on synthetic turf fields. These samples will include monitoring of the air they breathe with a small sampling tube attached to clothing during the activity.

- Following the activity, wipe samples will be collected from hands, arms and legs. The wipe sampling will be done with pads wetted with water, and pads wetted with a water and alcohol mixture.
- Urine samples will be collected before the activity, directly after the activity, and 24 hours after the activity.
- Blood samples will be collected twice, i.e. before the activity and 24 hours after the activity.
- Video of a subset of participants (24 participants) performing physical activities on the field.

Study Results

Study results will be handled as follows:

- Responses to the questionnaire will be evaluated by EPA and ATSDR.
- Air and skin wipe samples will be analyzed by laboratories at the EPA and the CDC.
- The blood and urine samples will be stored and tested for chemicals at a later time.
- Participants will not receive a copy of their test results.
- Only staff working on the study will be allowed to look at the paper and electronic records.
- Federal policy requires making the data collected publicly available. However, participant names or other identifying information will not be publicly released.
- Participant results may be linked to the rest of their study data for research purposes only.

Next Steps

EPA and ATSDR will release a draft status report at the end of 2016 that will summarize the agencies' progress in these two activities. The report will also outline any additional research needs and next steps.

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