Artificial Turf & Children's Health

Synthetic or artificial turf is a multi-layer product used as a surface on athletic playing fields, golf courses, and residential lawns.

It typically consists of:

A top layer of fibers usually made of nylon, polypropylene, or polyethylene designed to mimic natural grass blades; infill that provides cushioning and serves as a base for the blades; a backing layer; a drainage layer; and additional padding in some applications.

Artificial turf poses a health risk to children through chemical exposures.

Chemicals known to be carcinogenic such as heavy metals, volatile organic compounds (e.g. benzene), polycyclic aromatic hydrocarbons, and 1,3-butadiene have been detected in turf infill made from recycled tires. Further study is needed to characterize the complete chemical composition of infill made from materials other than tires.

Exposure can happen through:

- **Inhalation of chemicals and particles**
- **Dermal contact and absorption through the skin or open wounds**
- **Ingestion of turf infill particles**

Non-chemical exposures of concern to children are...

- **Heat**: Turf surface temperatures can get up to 55°F higher than grass, and recorded as high as 200°F on a summer day.

- **Turf burn**: Playing on artificial turf has been shown to result in more skin abrasions than grass.
Tips for safer play on artificial surfaces:

- Avoid use on very hot days.
- To prevent injury, make sure that fields are properly maintained.
- Ensure indoor fields are well-ventilated.
- Avoid use for passive activities (i.e. sitting, lounging, picnicking).
- Monitor young children to prevent accidental ingestion of the infill.
- Avoid walking with bare feet.
- Wash hands before eating, drinking, or touching mouth.

Clean cuts and abrasions immediately.

Brush hair thoroughly after play.

Remove and clean shoes and gear outside before getting in car or returning home.

Take off shoes and shake out equipment and clothes outside or over the garbage before entering your home.

Shower immediately after playing on artificial turf.

Vacuum any infill that comes into your home.