

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 layers 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), and polycyclic aromatic hydrocarbons, 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.



Inhalation of off gassed chemicals and particulates



Dermal contact and absorption through the skin or open wounds



Ingestion of turf infill particles

Non-chemical exposures of concern to children are



Heat: 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 in bare feet

Wash hands before eating, drinking, or adjusting mouth guard

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



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