

From: William Rothman
Sent: Wednesday, March 8, 2017 6:12 PM
To: Turf, Synthetic@OEHHA
Subject: March 10, Artificial Turf/crumb rubber input

From: William Rothman, Md

Belvedere, Ca 94920

I am writing to express concern about the dangers to people, especially children, who play in contact with the crumb material and then ingest it when, as is often the case, they eat sandwiches or other other foods that they hold in their hands, their hands having been contaminated with tiny crumb particles.

As you know the crumb particles, because they are derived by a shredding process, consist of particles that range in size from one-sixteenth of inch, or smaller, up to a size of perhaps one-quarter inch. Although the name of the material, "crumb rubber", might suggest that it is solely rubber, it is, as you know, since it is made from automobile tires, made up at least 45% aromatic hydrocarbons, some of which, such as toluene, xylene and other aromatic hydrocarbons, are known carcinogens. Although testing for leaching of such contents has been done using water, and using acid to simulate what would happen in a person's stomach, to the best of my knowledge no leaching tests have been done to test for the effects of exposure of the crumb material to, as would be the case with ingestion, the various other gastrointestinal digestive enzymes with which ingested crumb material would, of course, come in contact. Without knowing whether such exposure would lead to the leaching into the intestine of the carcinogens contained in the crumb material it would appear to be impossible to eliminate the possibility that those people, especially children, ingesting the crumb material in the way described above, would be exposed to the known carcinogens contained in the crumb material. Based upon those facts, I do not feel that artificial turf containing "crumb rubber" can be considered safe.

I would appreciate receiving any comments that staff might have on the facts and reasoning contained in the input I have provided.

Thank you for your attention

Sincerely,

William Rothman, M.D.