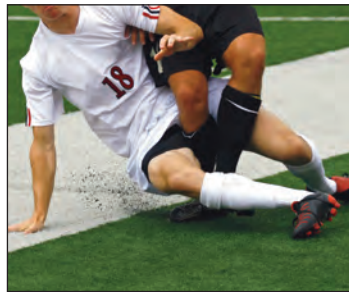


## 10. The fields are a danger for concussions unless they are continually refilled with crumb rubber.



Synthetic turf fields deteriorate over time and get harder as the crumb rubber infill compacts and migrates off the fields. The belief that artificial turf does not need ongoing maintenance is a myth. In fact, to make fields as safe as grass for head injuries, additional toxic crumb rubber must be added continually.

## 11. Both the U.S. EPA and the Consumer Product Safety Commission (CPSC) no longer support safety claims for synthetic turf fields or playground rubber mulch.



Both the CPSC and the EPA say they do not know enough to claim that synthetic turf fields are safe. The EPA, the CPSC and the Centers for Disease Control and Prevention (CDC) are investigating crumb rubber for its health effects.

## 12. As more people become aware that crumb rubber could pose a danger to health, the synthetic turf industry has begun to offer other infills—but are they safe?

As parents become more concerned about the potential health risks that crumb rubber poses to their children, industry is

advising many towns and schools to pay more and purchase alternative infills. Alternative infills have not been independently tested for their health effects. Towns and schools have an obligation to have their children and students play on a



safe surface—and there is no safer surface than grass.

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# 12 reasons why synthetic turf fields pose a health risk.



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## 1. Synthetic turf fields are made of plastic grass infilled with 40,000 shredded waste tires known as “crumb rubber.”

The crumb rubber infill is put in the fields to help the fake green plastic blades stand up like grass and soften the fields.



There is no barrier between the rubber crumbs and the athletes who play on the fields. The rubber crumbs get into the players' shoes, socks, clothing and even into their mouths, ears and hair. The crumb rubber gets tracked off the fields and into cars, schools and homes.

## 2. Crumb rubber contains 92 chemicals, of which 11 are carcinogenic.

Ninety-two (92) chemicals were found in the 14 samples of shredded used tires analyzed. Half the chemicals had not been

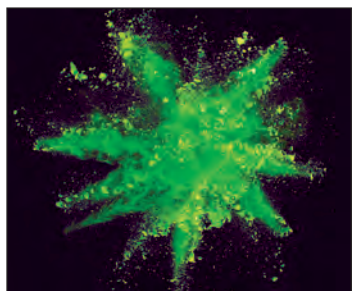


tested by government, and those that had some government testing contained 11 carcinogens and 20 chemicals that can irritate skin, eyes and lungs.

Why do coaches and parents

allow their children to play on these fields when they know they contain toxic chemicals? One answer is that industry's claims of safety have drowned out scientists and parents who claim the fields pose a danger.

## 3. As the fields get used, the crumb rubber breaks down and creates a dust that contains carcinogenic chemicals that are easily inhaled.



The dust from the rubber crumbs contains carcinogens and can be inhaled into the deepest sections of the lungs.

Once in the lungs, the toxins can be distributed throughout the body.

## 4. Cancer cases among athletes who have played on synthetic turf continue to grow.

As the cancer rates continue to grow, there is surprisingly no governmental agency collecting the health data on the cancer



and respiratory cases connected with playing on synthetic turf fields. These cancer cases are instead being tracked and collected by a private citizen who reports that the cancers cases are mainly lymphomas and leukemias; both are cancers

heavily influenced by environmental toxins. In addition to that evidence, the majority of cancers are among soccer goal-keepers—the most heavily exposed players on a soccer team.

## 5. European studies from Sweden, Italy and Spain all concur that the fields are dangerous.



All of these studies identify the cancer risk in synthetic turf fields and recommend that there be no further construction of fields containing rubber tire crumbs in their countries. Sweden considers rubber tire crumbs to be hazardous and recommends that

no new fields containing them be installed, Italy considers the rubber tire crumbs to be carcinogenic, and Spain wants them regulated because of their risks to health.

## 6. Synthetic turf fields are maintained with additional toxins: chemical disinfectants, flame-retardants and antimicrobials.



Because synthetic turf fields are made out of petrochemical products, they are highly flammable. As a result, many fields now contain flame-retardants, and they too are toxic. Because many students were getting a serious staph infection

known as MRSA from the fields, most fields now contain antimicrobials which are often toxic.

## 7. Because the crumb rubber pieces are so small there is nothing keeping them in place and they migrate off the fields.



Athletes complain that crumb rubber pieces get in their eyes, hair, and ears, adding to their toxic exposures. As well, the crumb rubber gets tracked into school dormitories, cars and homes on players' shoes and socks.

## 8. Synthetic turf fields get very hot in the summer and pose a danger.



Many schools, towns and sport camps use their synthetic turf fields in the summer months. Synthetic turf fields get much hotter than grass fields, and it is important for coaches and parents to be aware of this fact. Synthetic turf fields get 60 to 70

degrees hotter than the outside air. This excess heat makes these fields potentially very dangerous. The University of Arkansas measured the fields to be anywhere from 173 degrees to as high as 199 degrees when the outside air was 98 degrees.

## 9. As the fields heat up, the chemicals in the fields volatilize, creating a greater exposure risk for players.



Heat causes chemicals to outgas more quickly. This means that in the warm weather the toxic chemicals in synthetic turf fields become even more likely to be inhaled by those who play on these fields.

When athletes play sports, they often breathe faster and more deeply, adding to their toxic exposures.