

**Environment and Human Health, Inc.**  
**1191 Ridge Road**  
**North Haven, Connecticut 06473**  
**Phone (203) 248-6582 Fax (203) 288-7571**

<https://www.cga.ct.gov/2016/TOB/h/pdf/2016HB-05139-R00-HB.pdf>

**AN ACT CONCERNING THE USE OF RECYCLED TIRE RUBBER AT MUNICIPAL AND PUBLIC SCHOOL PLAYGROUNDS. BILL 5139**

**Senator Dante Bartolomeo Representative Diana Urban and Members of the Committee on Children**

Environment and Human Health, Inc. is pleased to be in strong support of House Bill 5139, An Act Concerning The Use of Recycled Tire Rubber at Municipal and Public Playgrounds.

*Environment and Human Health, Inc. (EHHI) is a ten-member, science-based non-profit organization composed of physicians, public health professionals and policy experts. The organization is dedicated to protecting human health from environmental harms. EHHI does not receive any funds from businesses or corporations.*

Rubber tire mulch used in children's playgrounds as surfacing material has been shown to contain 12 carcinogens and 20 irritants. When parents call Environment and Human Health, Inc. and ask why their small children have black hands when they play on the playgrounds with rubber surfacing material – we have to tell them that is carbon black – which is often carcinogenic. 20 to 30 percent of all tires are made up of carbon black. This material is what adults have been putting in our playgrounds for our small children to play on.

**How did the country get to where we place ground-up waste rubber tires where our children play?**

**There is a waste tire for every person who lives in the U.S. each and every year. They are very hard to dispose of. EPA devised a plan 10 years ago to shred waste tires and put them in toddler playground surfacing and as infill in synthetic turf fields**

**There are many important reasons why ground-up waste tires should not be shredded and placed where children play. We will list just ten of these reasons, for brevity sake.**

**Reason Number One:**

The Yale University analysis of rubber mulch used in children's playgrounds showed 12 carcinogens and 20 irritants (skin, eyes and lungs) in the material. As well, carbon black makes up 20-30% of every tire and carbon black is often a carcinogen.

**Reason Number Two:**

The Empire State Consumer Project (ESCP) 2015 Children's Products Safety Report, found arsenic, cadmium, and zinc at "higher than current acceptable limits." This testing turned up levels of toxics that exceed the New York State Department of Environmental Conservation (DEC) for Brownfields, which are former hazardous waste sites. Zinc levels are high enough to kill plants and aquatic organisms and cadmium is a carcinogen.

<https://drive.google.com/file/d/0B10JrTWWsJzRX0YyYm9BQW5rcGM/view> *ESCP Child Product Safety Report 2015 See page Page 35*

As well, North Carolina's Agricultural Department sent a notice to all their plant and nursery growers not to use ground-up rubber tire mulch, as it will kill plants and other living organisms. This is the same material as the rubber mulch used in playground surfacing. <http://www.ncagr.com/agronomi/pdf/rubber.pdf>

**Reason Number Three:**

EPA is retracting any safety assurances it gave in the past and is now saying "new science" is needed to answer questions about safety and "existing studies do not comprehensively address the recently raised concerns about children's health risks from exposures to tire crumb."

<http://www.nbcnews.com/storyline/artificial-turf-debate/senators-call-independent-crumb-rubber-turf-study-n459001>

**Reason Number Four:**

Numerous cancers are developing among students and athletes who have played on synthetic turf fields with crumb rubber infill. Crumb rubber infill is made from the same material as the rubber mulch used in children's playgrounds.

**As of this January 2016** there are 203 athletes who have played on synthetic turf and reported cancers to Amy Griffin, (Head Coach, Women's Soccer, University of Washington) and of those 203 ---123 have blood cancers - or over 60% have blood cancers.

**Reason Number Five:**

At Senator Blumenthal's press conference on February 12, 2016 he announced there would now be a comprehensive federal investigation into crumb rubber infill in synthetic turf fields and into the rubber mulch put in children's playgrounds, due to the health and cancer concerns with these waste tire products.

**Reason Number Six:**

Yale physicians recommend not playing on synthetic turf fields with crumb rubber due to health concerns.

<http://www.nhregister.com/opinion/20160102/letter-to-the-editor-safest-material-for-athletes-is-grass>><http://www.nhregister.com/opinion/20160102/letter-to-the-editor-safest-material-for-athletes-is-grass>

.....What concerns us as physicians and health professionals is that there is mounting evidence that the rubber tire infill material can be carcinogenic and therefore there could be a health risk.....

.....We believe that what has happened .....has been a massive failure of government to protect the public by allowing shredded-up waste tires to get into the market place and put where children, students and athletes play. As a result, a generation of children and athletes has been put at risk.

Thank you for your consideration of our views.

Signed,

**Pinar Kodaman, MD, Ph.D.** - Assistant Professor of Obstetrics and Gynecology and Reproductive Sciences, Yale University School of Medicine;

**Hugh Taylor, MD,** Anita O’Keefe Young Professor and Chair of the Yale Department of Obstetrics, Gynecology, and Reproductive Sciences;

**Robert LaCamera, MD,** Clinical Professor of Pediatrics, Yale University School of Medicine;

**Susan Addiss MPH, MURs,** - past commissioner of the state Department of Public Health;

**Andrea Asnes, MD, MSW,** Associate Professor of Pediatrics at the Yale School of Medicine;

**Nancy Alderman, MES,** - President of Environment and Human Health Inc.;

### **Reason Number Seven:**

Shredded waste tire rubber leaches its toxins and heavy metals.

#### **Washington State University Extension Fact Sheet \* FS163E**

Decomposition of rubber means that breakdown products, including heavy metals and other chemicals of concern, leach into the surrounding soil and water. Rubber leachates also contain various plasticizers and accelerators used during the vulcanizing process, a process in which rubber is chemically treated to give it useful properties such as strength or elasticity. Decades of research have confirmed that entire aquatic communities of algae, zooplankton, snails, and fish **are** killed when exposed to rubber leachates.

The leaching problem increases as the particle size of recycled tires decreases. In other words, the smaller the particle size, the greater the potential for leaching. Toxins associated with crumb rubber (Figure 3), a more finely ground type of rubber used on athletic fields, are well documented.

### **Reason number eight:**

Senators Blumenthal and Nelson **have asked** the President to look into health concerns of children playing on shredded rubber waste tires.

In their press release they state: “the possible correlation between crumb rubber and cancer suggested by recent reports warrants further scrutiny. "Given that millions of

children and young athletes play on crumb rubber synthetic surfaces every day, this correlation with cancer cannot be ignored."

**Reason number nine**

**Academic Study from the University of Sienna, Sienna, Italy.**

<http://www.omicsonline.org/open-access/release-of-polycyclic-aromatic-hydrocarbons-and-heavy-metals-from-rubber-crumb-in-synthetic-turf-fields-2161-0525.1000265.pdf>

**Abstract**

We evaluated in nine samples of rubber crumb the total content of some heavy metals (Zinc, Cadmium, lead, Copper, Chromium, Nickel, Iron) normally found in tires. The results showed high levels of PAHs and zinc in all rubber crumb samples compared to rubber granulate limits set by Italian National Amateur League (LND)

**Below is from the conclusion section.**

"The results of the present study demonstrate that PAHs are continuously released from rubber crumb through evaporation.

From the CDC on PAHs.

<http://www.atsdr.cdc.gov/csem/csem.asp?csem=13&po=11>

The carcinogenicity of certain PAHs is well established in laboratory animals.

**Reason number ten**

[http://www.elcorreodelsol.com/sites/default/files/chemosphere\\_maria\\_llompart.pdf](http://www.elcorreodelsol.com/sites/default/files/chemosphere_maria_llompart.pdf)

Study done at The University of Santiago de Compostela , Spain

**From the conclusion section of the study**

This study highlights the presence of a high number of harmful compounds, frequently at high or extremely high levels, in these recycled rubber materials. **Therefore, they should be carefully controlled, and their final use should be restricted or even prohibited in some cases.**

Submitted February 16, 2016

BY

Nancy Alderman, President, Environment and Human Health, Inc.