

WE NEED TO SAY NO TO SYNTHETIC TURF

When an institution or a jurisdiction has available grass fields, as most communities in Canada do, it is a terrible mistake to install synthetic turf fields, especially those made from materials containing recycled rubber tires. There are two fundamental reasons to avoid these products. The first involves the health of our children. And the second, related objection centers on the negative environmental impact of synthetic turf fields.

HEALTH:

Unfortunately, few people are aware of the actual level of scientific research into these playing surfaces, and virtually everyone continues to consume them despite the future likelihood of litigation unimagined at this time, but altogether possible in the future.

I am someone who has invested several thousand dollars of my own funds for an investigation of synthetic turf carried out at Rutgers University in the United States. That research found the usual troubling factors associated with rubber pellet fields, but the science remained incomplete. And there was a very good reason for this fragmentary result.

To my knowledge, no one has done a full and thorough scientific study of even one set of these fields. Why? Because even in one field of recycled tire material you can have product coming from more than one hundred different sources; not surprising, since an average field can have the contents of 20,000 to 40,000 recycled rubber tires. To do a proper investigation, one needs to take many samples from all over the surface, and simultaneously attempt to trace the origin of the material. Secondly, to truly examine the effect of the material on young players, one really needs a longitudinal study over a period of approximately 15 years, with at least one control group of youngsters who have always played on natural grass, and another group of people who have played a great deal on the same artificial field.

Obviously, a thorough study of this kind would require the long-term co-operation of many people and the expenditure of something like – this is my estimate -- \$10 million dollars.

That kind of work has simply not been done. And what one has instead— almost always – are “studies” that are simple summaries of supposedly already completed research whose paucity is truly depressing.

The precautionary principle dictates that the agent of possibly harmful change bears the burden of proof to establish that the change he or she is initiating does not cause harm.

In the case of these synthetic fields, we as a society, I believe, have thrown the precautionary principle out the window. We expose our children to risk, I think, and we allow them to bear the burden of testing the product, in the same way that we allowed

ourselves to smoke ourselves to death before litigation eventually established the responsibility of tobacco companies for harm done to individuals.

Here is an excerpt from an NBC News investigation examining the disquiet felt in the United States by Washington state athletic coach Amy Griffin when she noticed high levels of cancer among soccer goalies who played on synthetic turf fields.

The NBC report remarks:

“Artificial turf fields are now everywhere in the United States, from high schools to multi-million-dollar athletic complexes. As any parent or player who has been on them can testify, the tiny black rubber crumbs of which the fields are made -- chunks of old tires -- get everywhere. In players' uniforms, in their hair, in their cleats.

But for goalkeepers, whose bodies are in constant contact with the turf, it can be far worse. In practices and games, they make hundreds of dives, and each plunge sends a black cloud of tire pellets into the air. The granules get into their cuts and scrapes, and into their mouths. Griffin wondered if those crumbs - which have been known to contain carcinogens and chemicals - were making players sick.

"I've coached for 26, 27 years," she said. "My first 15 years, I never heard anything about this. All of a sudden it seems to be a stream of kids."

Since then, Griffin has compiled a list of 38 American soccer players -- 34 of them goalies - who have been diagnosed with cancer. At least a dozen played in Washington, but the geographic spread is nationwide. Blood cancers like lymphoma and leukemia dominate the list.

No research has linked cancer to artificial turf. Griffin collected names through personal experience with sick players, and acknowledges that her list is not a scientific data set. But it's enough to make her ask whether crumb rubber artificial turf, a product that has been rolled out in tens of thousands of parks, playgrounds, schools and stadiums in the U.S., is safe for the athletes and kids who play on it. Others across the country are raising similar questions, arguing that the now-ubiquitous material, made out of synthetic fibers and scrap tire -- which can contain benzene, carbon black and lead, among other substances -- has not been adequately tested. Few studies have measured the risk of ingesting crumb rubber orally, for example.”

(<http://www.nbcnews.com/news/investigations/how-safe-artificial-turf-your-child-plays-n220166>)

Let us make two arguments regarding this report.

First, let us assume that there is categorically no link of “cancer to artificial turf.” Then, presumably, the disproportionate number of sick people who also played on synthetic turf, as observed by coach Griffin, is simply a chance coincidence and nothing can be concluded from the coach’s observations.

But, secondly, let us say that there is a connection of “cancer to artificial turf” and that in the future such a causal connection is proven scientifically. What then will be the legal position of officials and responsible people who can be proven to have deliberately received health warnings made to them prior to the installation of the surface in a place or jurisdiction where these officials have authority?

It is difficult to answer the question, but I know that in North America there are already people ready and waiting to initiate class action suits in case such an evolution of the testing research should take place.

THE ENVIRONMENT

There is one element of damage to health that is incontestable. Sustaining the health of others is a question of trying not to remove an obvious good for both children and adults.

For example, if families live near an unpolluted canal where people can swim and then that body of water becomes damaged by pollution, to the point that swimming becomes impossible and certain people even become ill, then the polluter becomes liable for degrading the environment and harming individuals. A previously benign environment has been degraded and a previous good has been removed.

The removal of a previous environmental good is what results, I think, from the substitution of a natural grass field with a synthetic turf field.

Synthetic turf fields produce a very obvious heat island effect. Interestingly, even the most humble and ill-maintained field of grass carries out work of photosynthesis that has marked benefits for people playing on that grass. A natural grass field absorbs CO₂ and generates oxygen. That makes the ambient air markedly cooler. Also, the soil on grass fields is capable of absorbing and breaking down infectious material, such as mucous. A synthetic field is hot in high temperatures, and athletes who scrape themselves on the inorganic surface must have their skin surfaces treated immediately.

Attached to this letter is the heat-island study carried out in Montreal by Camilo Pérez Arrau in 2007. You will note that the natural grass fields of Westmount Park are used as a control for the comparative study, and that these fields show up as blue on the color-coded temperature gradient that Arrau uses.

I happen to live right in front of these fields – and I, along with other members of Save The Park! (a group that belongs to The National Association of Olmsted Parks, in Washington D.C.) fought successfully to maintain these grass fields and to not have them replaced by synthetic turf.

I know these fields well. They are not wonderfully maintained and there is not anything that special about them. But they provide incontestable goods to the people who live nearby. They create an air temperature that is noticeably cooler in summer time and relatively oxygen-rich compared to the surrounding, urban streets such as Ste. Catherine.

Arrau's study is based on Landsat 5 photos and he matches natural fields with well-known synthetic surfaces in Montreal. The temperature difference in every case is from 5 degrees Celsius to close to 10 degrees Celsius difference. When New York City first looked into the state of its own synthetic fields, it began to post heat warnings in the summer precisely because of the heat island effect.

Natural grass fields are healthier but they are also multi-purpose areas. People can play freely on them, lounge, picnic, and stand closely if they want to watch young children play.

Both animals and human beings fare much better on natural grass. To take away a natural field from someone, I believe, is to do them environmental harm.

If I had young children at this time – I would not permit them to play on synthetic surfaces, and I would take that decision as part of my job as a parent, exercising a precautionary principle on behalf of my own kith and kin.

We have rushed obsessively to install these artificial surfaces, to the point that we believe, somehow, that it is impossible to play field games on natural surfaces.

Quite frankly this attitude resembles a kind of obsessive addiction that has harmful effects both for the consumer and the supplier.

I – and a number of people such as myself – are in earnest about this issue. We have already spent thousands of dollars seeking answers to our questions, and we will probably end up – collectively – spending millions until we are really know the truth about the questions raised by such people as Amy Griffin.

As is often said in another context, we believe we all need to learn to say NO and to say NONOW.

Patrick Barnard
Westmount Quebec
Jan. 21, 2015