

## Forgive this pun, but once again, flame retardants are a hot topic in the news

By ACSH Staff — August 7, 2014



Chemicals found in moms and kids, screams the headline! There

is nothing new. This time, the news comes from an [article](#) [1] in the *Chicago Tribune* written by Michael Hawthorne. News is a stretch, since this has been going on forever, with the same arguments being recycled over and over.

Yet, our dear friends at the Environmental Working Group (EWG) seem to be so enamored with recycling (another pun, and a really bad one at that) the topic is here once again. Why? Who knows? Maybe they haven't reached their annual quota of phony scares, and are doing the activist equivalent of rerunning episodes of *Green Acres*. Ask them.

The story is always the same: Organic chemicals that contain multiple atoms of bromine and chlorine in their structure usually have two properties: 1) They don't burn, which is why they are used as fire retardants; 2) They are highly stable within the body, and are therefore metabolized and excreted much more slowly than vast majority of other chemicals, drugs, foods, etc. The latter property is responsible for bioaccumulation the storage of substances in the body, usually in fat.

This is well known. Thus, the real question becomes although these things are stored in our bodies, are they harmful, especially in minute quantities? This is where the ongoing controversy lies.

The chemicals are ubiquitous, found in pajamas and many types of furniture, automobiles and even computers, so we are all exposed to them, and some amount will be found in just about everyone when ultra-sensitive analytical techniques are used. So, it is no surprise that a new study by EWG and researchers at Duke university found flame retardants in all of the people that they tested 22 mothers and 26 children.

ACSH's Dr. Josh Bloom comments, Last I heard, men were also combustible, so it is reasonable to ask why the study was confined to women and children. Most likely this is because mentioning women and children is a magic formula for generating extra fear on any given topic. It works quite well.

Another very effective scare tactic is to talk about relative levels of these chemicals in children as opposed to adults.

This was done splendidly: [Researchers] found that the average child tested had levels of the chlorinated tris byproduct that were five times higher than those in his or her mother, likely because young children ingest contaminated dust while playing on the floor.

One child had levels 23 times higher than the mother.

While this one sentence is perfectly crafted to horrify mothers, its bias is shown by the lack of complete information. For example, is the level in the mother a cause for concern? Or is it 1,000 times lower than the amount that *could* conceivably be considered hazardous? How about a million times lower? If so, then the 23-fold higher level in this one child is meaningless. It is essentially like multiplying zero by any number you choose.

To his credit, Hawthorne addresses this: It is unclear what, if any, hazards the flame retardants pose at the levels detected in moms and kids. But then: Studies conducted by its manufacturer found that exposing rats to the flame retardant can lower birth weight, alter female genitalia and cause skeletal malformations such as fused ribs and vertebrae.

This is a standard high dose rat study, where the animals are given absurdly high doses of a chemical and then examined for any effect. This tells us essentially nothing about the effect of the same chemical found in minuscule quantities in a person.

When you add in the fact that these chemicals were originally mandated for fire protection by California perhaps the most chemophobic state in the country and it now has placed some of them on its Proposition 65 list of carcinogens and reproductive toxins, the story becomes even more complex.

Finally, Hawthorne says, The next step for researchers is determining how the chemicals might affect people at the levels detected. If the example of PBDE flame retardants is a guide, answering that question could take several more years.

It is impossible to say how many lives will be saved from fires during those years. This is why it is especially important to use the best possible science to make public health decisions.

If that sounds familiar, it is because this is our mantra at ACSH. (We have a [publication devoted to this topic](#) <sup>[2]</sup> for your interest).

**Source URL:** <https://www.acsh.org/news/2014/08/07/forgive-this-pun-but-once-again-flame-retardants-are-a-hot-topic>

**Links**

[1] <http://www.chicagotribune.com/news/watchdog/flames/ct-flame-retardants-child-study-met--20140804-story.html#page=1>

[2] <http://acsh.org/2006/08/brominated-flame-retardants-a-burning-issue/>