

11-07-2016

## Your Couch May Be Harming Your Child's Brain

A new study raises concerns about how furniture laced with flame retardants affects kids.



(Photo: Emma Innocenti/Getty Images)

The sofa in your living room, your mattress, and the armchair in your den—those are just a few of the common household items to which manufacturers might add flame retardants. After all, no one wants a lit cigarette dropped on a bed to burn down an entire home. A study released Monday about health concerns linked to the [use of flame retardants](#) might reignite the push to get the chemicals banned nationwide.

According to the [study](#), published in the journal *Environmental International* by the Environmental Working Group and Duke University, researchers have detected abnormally high levels of flame retardant chemicals in the urine of kids in California compared with children in New Jersey.

According to the American Chemistry Council, operator of the website [flameretardantfacts.com](http://flameretardantfacts.com), concerned consumers should focus on how the good outweighs the bad, as the number of household fires has dropped significantly since flame



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retardant legislation was mandated in the 1970s. But adding the chemicals to household items may not reduce flammability.

“Adding large quantities of fire retardant chemicals doesn’t do much to improve furniture fire safety,” the study’s coauthor, Johanna Congleton, an Environmental Working Group senior scientist, told TakePart. “It depends on the barrier covering the foam.”

The addition of flame retardants to furniture is [linked](#) to the tobacco industry’s insistence that it could not [create](#) a smolder-safe cigarette. Although items treated with flame retardants can be found in homes nationwide, until 2014 California was the only state to explicitly require that foam-filled furniture and other consumer goods—such as baby strollers or changing pads—be treated with the chemicals. Sofas produced for sale in California before 2014 could carry [two to three pounds](#) of flame retardants.

As a result, the study’s researchers found that levels of the potentially carcinogenic flame retardant compound TDCIPP were 15 times higher on average in Californian toddlers than their mothers, while levels were only six times higher in New Jersey toddlers. The level of TPHP, a suspected endocrine disruptor, was nearly six times higher in Californian toddlers over their mothers, while it was only three times higher in New Jersey children.

“Children’s ages and hand-to-mouth activity were strongly associated with higher exposures to some of the flame retardant chemicals,” wrote the study’s authors. Younger kids, such as toddlers who scramble across the floor or roll around on furniture, were also more likely to have higher levels of flame retardant chemicals in their bodies than older kids. That’s “probably because they put their hands and objects in their mouths more often. Flame retardants are known to contaminate house dust, which accumulates on floors where children play,” wrote the authors.

The study is part of a growing body of evidence about the negative impact of flame retardants on the health of people and wildlife. Studies analyzing flame retardant exposure on zebra fish have found that there are behavioral [effects](#) and some physical development [problems](#) in marine life. [Research](#) has also linked the chemicals to lower IQ and hyperactivity in children and [connected](#) them to suspected endocrine disruption and cancer.

Brominated vegetable oil, a flame retardant chemical that is banned in Europe and Japan, has been found in [orange soda](#) and Powerade. In 2014, Coca-Cola, the manufacturer of Powerade, announced that [it would remove the controversial chemical](#) from the beverage after a public outcry.

Flame retardants made their way into mainstream furniture production in 1975, when California legislators issued Technical Bulletin 117, a list of requirements for testing fire safety on upholstered furniture. While the bulletin was strictly for products used in California, manufacturers across the U.S. and Canada adopted the regulations.

Fillers had to withstand ignition from an open flame (such as a lighter) for at least 12 seconds, Congleton said. But flame retardants only slow the spread of fire rather than stop it entirely.



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“The cheapest and easiest way [to follow requirements] was to add fire retardant chemicals to consumer goods,” Congleton said. “There was no actual requirement [for those specific chemicals], but it effectively led to their heavy and widespread use.” The chemicals aren’t absorbed into furniture fillers, so they become airborne, settling on other surfaces or being inhaled.

A revision of the bill by the California Bureau of Home Furnishings in 2013 set new flammability standards, including the removal of the foam flame retardant requirement. Furniture makers can pass flammability tests by using fabrics with tighter weaves and fire-resistant fibers. As of June, 14 states have banned or restricted flame retardant usage in children’s products or upholstered furniture. New Jersey is [considering](#) banning items that contain the chemicals.

Congleton and other environmental health experts [advise](#) buyers to look for furniture without the T.B. 117–approved label and ask retailers if their products contain flame retardants. The Center for Environmental Health, an Oakland, California–based nonprofit advocacy group, [lists](#) furniture brands that have formally agreed to stop using fire retardants in their products.

“You can’t reverse the damage, but what you can do is buy better going forward,” said Charles Margulis, the Center of Environmental Health’s media director. “People who have [flame retardant] furniture in their homes can take measures to minimize the damage, such as vacuuming more to keep dust away, where these chemicals are.”

<http://www.takepart.com/article/2016/07/11/flame-retardant-couch-harm-children>