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[Killer Couch Chemicals](#)

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Outdated California regulations are leading to toxic fire retardant chemicals in furniture sold in California and distributed across the nation. Russell Long of Friends of the Earth, Mary Brune of Making Our Milk Safe (MOMS), biophysical chemist Arlene Blum, and Joan Blades of MomsRising.org, will share their adventures as they work together to phase out toxic brominated and chlorinated chemical fire retardants from the nation's furniture.

Assembly Bill 706 Diary: The Couch CAT-astrophe

By Arlene Blum PhD

"Mysterious thyroid disease in cats linked to flame retardants, EPA chemists report"

My venerable black cat Midnight, who is suffering from hyperthyroid disease, is the mascot for my work in support of AB 706 to remove toxic fire retardant chemicals from our nation's furniture. In a year, Midnight has gone from being a healthy 14-pound cat to a seven-pound cat with kidney problems. When our vet diagnosed her disease he told me that hyperthyroidism is a new condition for cats that emerged in the 1980s and is today a leading cause of death in cats. My vet surmised this epidemic is caused by a chemical in our environment.

I'm a chemist. Thirty years ago I did research contributing to the ban on Tris, a toxic fire retardant used to treat children's sleepwear. Since PBDE fire retardants are structurally similar to thyroid hormone and they were introduced into household products just before the emergence of hyperthyroidism in cats, I guessed that PBDEs might cause Midnight's disease.

My vet found a study of hyperthyroid cats and PBDE's, and we sent off samples of Midnight's blood and my house dust to be tested. The result was frightening. Midnight has very high levels of PBDE's in her body and my house dust contains 95 parts per million, which is phenomenally high. For comparison, a median level of 3 parts per million was found in by an EWG study.

Yesterday [an EPA study](#) was published in *Environmental Science & Technology*, from the American Chemical Society, confirming a connection between PBDE fire retardants in dust and Midnight's disease.

Now I'm really worried. Is Midnight like the canary in a coal mine? What about my family? We are exposed to the same chemicals as Midnight. Fire retardant chemicals are believed to migrate out of furniture and then accumulate in house dust, food, animals, and people. People in the United States have the highest PBDE levels in humans worldwide, but our cats are even more exposed -- some with levels 100 times greater than humans.

Women in North America have 10 to 40 times the levels of the PBDEs in their breast milk, as do women in Europe or in Asia. And these chemicals pass through the placenta and are found in infants at birth, making a double dose of toxins for young children when they are most vulnerable.

When tested in animals, fire retardant chemicals, even at very low doses, can cause endocrine disruption, thyroid disorders, cancer, and developmental, reproductive, and neurological problems such as learning impairment and attention deficit disorder. Ongoing studies are beginning to show a connection between these chemicals and autism in children.

Young children, with their smaller size and tendency to mouth objects could be as highly contaminated as cats, the EPA researchers estimated. Children are exposed at a critical developmental window to a far higher load of endocrine-disrupting compounds than adults.

Pregnant women have the biggest cause for concern because animal studies show negative impacts on brain development of offspring when mothers are exposed during pregnancy. And bioaccumulating PBDEs can stay in our bodies for more than a decade.

I'm concerned about my 20-year-old daughter who might well want to have children in the next decade. She and Midnight have both lived in our house. Could her PBDE levels be high like Midnight's?

Instead of just worrying, I am working as the scientific advisor for AB 706 to help reduce the amount of toxic fire retardants in all of us. After 20 years mostly at home raising my daughter and writing my memoir, *Breaking Trail: A Climbing Life*, I am delighted to be doing such important scientific work.

The good news is most PBDE's aren't allowed in furniture any more. The bad news is that the very same Tris, I'd helped remove from kid's pajamas decades ago is replacing them. A handful of companies -- Albemarle, Dead Sea Bromine, and Chemtura -- supply potentially toxic fire retardant chemicals to the foam and furniture industries with assurances of safety. And these fire retardant manufacturers have already spent \$1.4 million in Sacramento this year opposing reforms that would protect our health and environment. They are even calling for federal regulations that would lead to higher levels of fire retardants in all furniture, bed clothing, and pillows in the entire country. All in the name of fire safety which can be better achieved without toxic chemicals.

Enough is enough. It is time to stop adding chemicals to our furniture and our environment unless the manufacturers can first show they are safe. California Assembly Bill 706 will prohibit in furniture the most dangerous fire retardant chemicals so the chemical manufacturers cannot continue switching from one toxin to another.

Soon the decision of whether California will continue to poison our pets, our children, and the rest of the nation will be made by Governor Arnold Schwarzenegger. I'm replacing my couch and chairs which are full of brominated fire retardants and will write next time the story of how I learned what is in my furniture.

Sadly, it is too late for Midnight. When industry lobbyists proclaim there is no proof of adverse health effects from the toxic chemicals they put in our furniture, I look at skinny Midnight, barely eating, even her favorite foods.

The nation's health is in the hands of the California Legislature and Mr. Schwarzenegger. Let's hope they will see fit to end this "couch CATastrophe."

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