Summary

Research shows higher amounts of flame retardants in people of color and in low-income households, including children. This may be due to a number of factors including:

- Homes with older furniture containing banned flame retardants
- Smaller homes with poorer ventilation
- Kids without available/ safe outdoor play spaces spend more time inside
- Occupational exposure of workers in professions like manufacturing, construction and recycling
- Community locations near industrial and contaminated sites

There are elevated concentrations of indoor pollutants including PBDEs in low-income households due to indoor and outdoor sources, physical structures and residential activity patterns.


Dust from California homes had 4-10 times higher levels of PBDEs than other places in North America, and Californians had on average twice the amount of PBDEs in their blood than other Americans.


Dust from low-income households in California had the highest concentrations of PBDEs ever measured, and the researchers estimated that children in these homes were exposed to unsafe amounts of PBDEs.

Flame retardant toolkit

Toddlers from lower socioeconomic status households tend to have higher levels of PBDEs.

Mexican American 7-year-olds in California have more PBDE chemicals in their bodies than other people in the United States, and children without a safe place to play outside tend to have higher levels of PBDEs.

6-8-year-old girls of color tend to have higher levels of PBDEs than white girls.

Workers that recycle polyurethane foam or install carpet have much higher levels of PBDEs than clerical workers or the general population.

There are very high concentrations of PBDEs in the indoor air of an electronics recycling facility and high concentrations of PBDEs in the air downwind of an automotive shredding/metal recycling facility.

This paper reviews evidence from a number of studies which find higher levels of PBDEs in people of lower socioeconomic status.
Health effects of flame retardants used in furniture and baby product foam

Summary

Flame retardants used in furniture and baby product foam are associated with hormone disruption, toxicity to the developing nervous system, reproductive toxicity, and cancer.

Some common flame retardants found in furniture and baby product foam are pentabromodiphenyl ether (pentaBDE, a mixture of PBDEs), chlorinated Tris (TDCPP) and Firemaster 550 (FM 550).


Higher levels of PentaBDE are associated with adverse health effects in people, including:

- Decreased IQ, fine motor coordination, and ability to focus attention in children


- Longer time to get pregnant for women
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- **Hormonal changes in men and women**


**Chlorinated tris (TDCPP) changes genetic material and causes cancer in animals.**


**Firemaster 550 (FM 550) damages genetic material and is associated with obesity and anxiety in animals.**


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