# Concerns raised over hazardous chemicals in children's mattresses



Recent research from Canada has raised concerns about the safety of children's mattresses, revealing that many of them contain hazardous chemicals potentially linked to brain damage and cancer. The study, conducted by a team of researchers, analysed the presence of toxic substances, notably flame retardants and phthalates, in the bedrooms of children aged between six months and four years.

The researchers measured the levels of over two dozen different types of chemicals throughout the children's bedrooms, finding the highest concentrations near their beds. A follow-up study of 16 new children's mattresses confirmed that these products were likely the primary source of the detected toxins.

Co-author Arlene Blum, who serves as the executive director of the Green Science Policy Institute, commented on the findings, stating, "Parents should be able to lay their children down for sleep knowing they are safe and snug." She further highlighted that flame retardants have a "long history of harming our children’s cognitive function and ability to learn," noting it is alarming that such harmful chemicals are still present in children’s mattresses despite their lack of proven fire-safety benefits.

Phthalates, synthetic chemicals used to increase flexibility in various products, were also identified in the mattresses. These substances are commonly found in items such as cosmetics, body lotions, and shampoos and have been associated with numerous health issues, including infertility, breast cancer, obesity, and various complications affecting cardiovascular and neurological health.

The research underscores the vulnerability of children to harmful chemicals, given their ongoing development, hand-to-mouth behaviours, and higher breathing rates compared to adults. The study indicated that children have more permeable skin and a larger skin surface area in relation to their body weight, making them particularly susceptible to chemical exposure.

Notably, the researchers simulated a child's body resting on the mattresses, leading to a significant increase in the emission of chemicals—occasionally by several times—under conditions mirroring those of actual sleep. The findings pointed out that while the tested mattresses were sourced in Canada, many of their components were imported from other countries, including the United States and Mexico, suggesting that similar concerns could extend to mattresses available throughout North America.

Miriam Diamond, the senior author and a professor at the University of Toronto, remarked, "Sleep is vital for brain development, particularly for infants and toddlers. However, our research suggests that many mattresses contain chemicals that can harm kids’ brains." She called for manufacturers and policymakers to ensure that children's mattresses are safe and conducive to healthy brain development.

In light of these findings, the researchers are advocating for improved vigilance from manufacturers regarding the chemicals in their products and the establishment of stricter regulations governing the use of such harmful substances in items designed for children. In the United States, certain types of phthalates are already banned in children's products, while the UK prohibits more substances in these categories and has stringent controls on phthalate content in food contact materials.

To mitigate children's exposure to these toxins, the researchers suggested practical measures for parents, including decluttering children’s sleeping areas of unnecessary pillows, blankets, and toys, as well as regularly washing and refreshing bedding and pyjamas. They recommend using undyed and neutral bedding, which is less likely to contain harmful chemicals, as a precautionary measure.

Source: [Noah Wire Services](https://www.noahwire.com)

## References

* <https://medicalxpress.com/news/2025-04-children-exposed-brain-chemicals-scientists.html> - This article discusses how children are exposed to brain-harming chemicals while sleeping, which corroborates the concerns about hazardous chemicals in mattresses.
* <https://www.canada.ca/en/health-canada/services/chemicals-product-safety/flame-retardants.html> - This resource highlights concerns about flame retardants like IPPP found in foam-containing mattresses, emphasizing potential health risks, particularly for infants and children.
* <https://www.dlsph.utoronto.ca/study-posting/chemical-exposure-of-young-children-while-sleeping/> - This study focuses on measuring chemical additives in young children's sleeping environments, which aligns with the findings on toxic substances near children’s beds.
* <https://toxicfreefuture.org/press-room/new-study-finds-80-of-baby-products-tested-contain-toxic-or-untested-flame-retardants/> - This study found that a significant percentage of baby products contain toxic or untested flame retardants, supporting the claim that these substances are prevalent in children’s products.
* <https://cockrell.utexas.edu/news/archive/7776-crib-mattresses-emissions> - This research highlights that crib mattresses emit high levels of potentially harmful chemicals, specifically VOCs, which is relevant to the discussion of chemical emissions from children’s mattresses.
* <https://www.noahwire.com> - This source provides general information on recent research about the safety concerns of children’s mattresses, though it does not offer specific technical details like the other sources.
* <https://www.dailymail.co.uk/health/article-14610031/Item-bedrooms-cause-brain-damage-sleep-experts.html?ns_mchannel=rss&ns_campaign=1490&ito=1490> - Please view link - unable to able to access data