Assessing inter-generational transfer of a brominated flame retardant.

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Source
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Abstract
Studies have shown that the lipophilic nature of polybrominated biphenyl (PBB) causes it to preferentially accumulate in breast milk posing a potential hazard for suckling infants. The purpose of this study was to examine the inter-generational transfer of PBB from mother to child and whether this association was modified by maternal breast-feeding patterns. One hundred and forty-five mother-child pairs that were participants of the Michigan Long-Term PBB Study were included in this analysis. Mothers were exposed to PBB via contaminated food between 1973 and 1974 and children were exposed in utero and for some, through breast-feeding. Seventy-three percent of children had a non-detectable serum PBB concentration (limit of detection (LOD) = 1 microg L(-1)). Mothers' serum PBB concentration at enrollment ranged from <LOD to 933 microg L(-1). The following variables were associated with the child having a detectable serum PBB concentration: maternal serum PBB > or =8 microg L(-1), breast-feeding > or =5.5 months, maternal age at child's birth > or =28 years, and being born during the PBB exposure period. Among mothers with a detectable serum PBB concentration, those who breast-fed > or =5.5 months were 6 times more likely to have a child with a detectable serum PBB concentration, compared to a non-breast-fed child (95% C.I., 2.0-19.6).

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