

COMMITTEE ON TOXICITY OF CHEMICALS IN FOOD, CONSUMER PRODUCTS AND THE ENVIRONMENT

COT statement on the potential risks from hexabromocyclododecanes (HBCDDs) in the infant diet: lay summary

1. The Scientific Advisory Committee on Nutrition (SACN) is reviewing the scientific evidence that bears on the Government's dietary recommendations for infants and young children. The Committee on Toxicity (COT) was asked to review the risks of toxicity from chemicals in the infant diet. This statement focuses on possible risks from hexabromocyclododecanes (HBCDDs) in the infant diet.
2. Technical mixtures of HBCDDs have been widely used as flame retardants incorporated in polymers and textiles, construction materials, furniture, and electrical equipment. By international agreement, the use of HBCDDs for all but construction purposes was banned in 2014. However HBCDDs are environmentally persistent, and exposures will continue to occur following the ban.
3. Infants can be exposed to HBCDDs through their presence in breast milk as well as other foods and domestic dust.
4. HBCDDs have caused toxic effects on the liver, thyroid hormones, and reproductive and nervous systems in experimental animals. Only limited data are available from studies of HBCDDs in human populations, and they do not allow a meaningful assessment of risks at the levels to which we are exposed through food.
5. The available toxicological data are insufficient to establish health-based guidance values for HBCDDs, and the COT concluded that it was more appropriate to consider the ratios between the highest doses that had been found not to cause adverse effects in animal studies and the estimated exposures of infants. Such ratios are known as "margins of exposure", and their interpretation should take into account uncertainties in the toxicological database, in the extrapolation from animals to humans, and in the estimation of exposure.
6. Overall the analysis indicated that estimated exposures via breast milk and food are not a cause for concern, but that high levels found in some samples of domestic dust are a concern. No data are available on potential exposures in the UK from infant formula, commercially produced infant foods or drinking water.
7. Given that most uses of HBCDDs are being phased out, and that the main source of exposure to residual environmental HBCDDs is ingested domestic dust, the priority for further research is continued monitoring of HBCDDs levels in dust to

ensure that they are declining as expected. It would also be useful to measure levels in infant formula and commercially produced infant foods, but this is of lower priority.

The full COT statement can be found at:

<https://admin.food.gov.uk/sites/default/files/HBCDDsstatementfinal.pdf>

Lay Summary to COT Statement 2015/02
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