

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

Addendum to the Overarching Statement on the potential risks from contaminants in the diet of infants aged 0 to 12 months and children aged 1 to 5 years – Lay summary

The Committee on Toxicity (COT) was asked by the Scientific Advisory Committee on Nutrition (SACN) to review the risk of toxicity from chemicals in the diets of infants (aged 0 to 12 months) and young children (age 1 to 5 years). The reviews will identify new evidence that has emerged since the Government's recommendations on complementary and young child feeding were formulated and will appraise that evidence to determine whether the advice should be revised.

[The COT identified a number of chemicals in 2015](#), which may be present in the diets of infants and young children and for which advice may be needed. Having reviewed the available evidence, in 2019, the COT published an [Overarching Statement](#), reviewing a number of these chemicals.

The following statement discusses the conclusions of the COT regarding the remaining chemicals, included in the Addendum to the Overarching Statement:

- Hexachlorocyclohexanes, cyclopiazonic acid, diacetoxyscirpenol, ergot alkaloids, moniliformin, nivalenol, sterigmatocystin, tetrabromobisphenol, zearalenone: The COT concluded that the estimated dietary exposures are not of toxicological concern for infants and young children.
- Polycyclic aromatic hydrocarbons: Estimated intakes of polycyclic aromatic hydrocarbons (BaP and PAH4) from human breast milk and food represent a low level of concern. Intakes from infant formula, soil and dust are not expected to contribute markedly to lifetime exposure.
- Fumonisin: Estimated exposures to fumonisins in the diet are not of toxicological concern. Intakes from infant formula are not expected to contribute markedly to lifetime exposure.
- Fusarenon-X: Estimated dietary exposures are not of toxicological concern. However, the COT noted that there were some uncertainties involved in the extrapolation of the data. The likelihood of co-occurrence of fusarenon-X with deoxynivalenol and nivalenol at the reported levels is low and co-exposure was unlikely to result in adverse toxicological effects.

- Sweeteners: No breastmilk data or information on dietary exposures for infants aged 0 to 1 years were available. However, sweeteners are not permitted in baby foods and solid food consumption for that age group would generally be lower than that of older children. Overall, the COT concluded that the estimated dietary exposures are not of toxicological concern.

Overall, the COT concluded that the above chemicals are not of toxicological concern for infants and young children.

- Monochloropropanediol (3-MCPD), its fatty esters and glycidol: In the absence of any newer UK-specific data, this assessment was based on the latest evaluation by the European Food Safety Authority (EFSA). Overall, the Committee agreed with EFSA's evaluation that some of the estimated exposures for glycidol and 3-MPCD are of potential concern. However, the impact of the uncertainties in the risk assessment are high.
- Aflatoxins: Due to limitations in the data, whilst there is no evidence that exposures are such that they are of concern, equally it is not possible to conclude that this is not the case. Given that aflatoxins are genotoxic and carcinogenic their presence is always undesirable and at the estimated levels of exposure it is not possible to exclude a safety concern. The COT therefore noted that there is a need for improved methods to measure actual aflatoxin levels.

Overall, the COT concluded that the above chemicals are of potential toxicological concern.

- Deoxynivalenol (DON) and its acetylated/modified forms: Dietary estimated exposures to DON, 15-Ac-DON, 3-Ac-DON, and the sum of all three forms are unlikely to be of toxicological concern. However, the COT noted that the sum of all forms is not based on measured values but on summing the individual concentrations provided. Therefore, the estimated exposures could be an overestimation of the actual values.
- Citrinin: Estimated dietary exposures to citrinin are not of toxicological concern for nephrotoxicity. However, the COT noted that due to the lack of and limitations of the available data, a concern for genotoxicity and carcinogenicity cannot be excluded.
- Patulin: Estimated dietary exposures to patulin are below a previously established safe level, however, definitive conclusions on the genotoxicity of patulin could not be reached.
- Tropane alkaloids (TAs): Overall, all estimated acute exposures to the most well described tropane alkaloids, (-)-hyoscyamine and (-)-scopolamine, and the sum of both are unlikely to be of toxicological concern. However, the Committee noted that a number of other tropane alkaloids of unknown potency were present, some at higher concentrations, in the samples. In the absence of any toxicological data and safe levels for these TAs there is a high degree of uncertainty to the potential risks associated with total TAs in the diet.

Overall, the COT concluded that a potential health effect of the above chemicals currently cannot be excluded due to data gaps and limitations.

Chemicals identified for review and not included in the Overarching Statement or the Addendum have been subject to a full review or are being discussed elsewhere by other Committees. A full list of all chemicals identified by the Committees, with the respective links to the discussion papers or Statements, where applicable, are listed in Table 1 in Annex A of the Addendum to the Overarching Statement.

The full COT statement can be found here: [Addendum to the Overarching Statement](#)

Lay Summary to COT statement 2020/04