National Food Institute maintains its assessment of bisphenol A

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After having examined the European Food Safety Authority, EFSA's new health assessment of bisphenol A, the National Food Institute, Technical University of Denmark, maintains its assessment of the chemical compound. The institute's researchers assess that the safe level recently recommended by EFSA does not adequately protect consumers against endocrine disrupting effects of bisphenol A.

The chemical compound bisphenol A, which is used in plastic packaging and paper, is suspected of having adverse health effects in humans. In January 2015 EFSA published a health assessment of the compound, which concludes that an intake of less than 4 micrograms per kilogram body weight per day does not pose a health risk. Previously EFSA had concluded that the tolerable daily intake, TDI, should be less than or equal to 50 micrograms per kilogram of body weight.

The National Food Institute has examined EFSA's toxicological evaluations with a focus on the main conclusions in the report and to determine whether the new TDI is sufficiently protective and thus gives the institute cause to change its earlier assessment of bisphenol A.

EFSA's recommended safe level of bisphenol A too high

The National Food Institute's scientists evaluate that EFSA's new TDI does not adequately protect against endocrine disrupting effects. One

reason is that EFSA does not apply an appropriate uncertainty factor. Moreover the researchers find that EFSA in establishing the new TDI has not sufficiently taken data from animal studies showing effects on female mammary gland, the male reproductive system, and brain development and function into account.

According to the National Food Institute's calculations the new TDI should be 0.7 micrograms per kilogram body weight per day or lower to be sufficiently protective against endocrine disrupting effects. The institute's assessment is based on the same studies as those in the EFSA report.

"We maintain the National Food Institute's previous risk assessment of bisphenol A. We evaluate that a tolerable intake of bisphenol A should be lower than one fifth of the EFSA recommended limit," Professor Ulla Hass from the National Food Institute says.

High exposure causes concern

EFSA has evaluated that for people with the highest level of exposure, men and women are exposed to more than 1 microgram of bisphenol A per kilogram per day, while children and teenagers are exposed to between 1.26 and 1.45 micrograms per kilogram day. Based on this, EFSA has concluded that intake of the compound does not pose a health risk, given that the maximum intake is three to four times less than the new recommended TDI.

"However comparison of the exposure to the TDI recommended by the National Food Institute shows that humans with a high exposure may exceed the safe limit. Their intake can come from food, cash receipts and cosmetics," Ulla Hass says.

"The health risks of bisphenol A are of concern particularly for highly

exposed persons. The concern applies particularly to pregnant or breastfeeding women as well as children as they will be sensitive to potential effects that occur even at low doses of the compound," Ulla Hass adds.

Neither EFSA's nor the National Food Institute's risk assessment takes into account that there can be increased risk caused by bisphenol A if present in a chemical cocktail with other environmental chemicals that have similar effects to bisphenol A. This means that the risk in both cases may be underestimated.

Provided by Technical University of Denmark