

Toxic chemicals in powdered baby milk and foods – and in the water used to reconstitute them

“Baby Foods Are Tainted with Dangerous Levels of Arsenic, Lead, Cadmium, and Mercury”

“New Disclosures Show Dangerous levels of Toxic Heavy Metals in Even More Baby Foods”



The logos of the companies that market infant and young child feeding products with high levels of toxic heavy metals are shown beneath the titles of the two Congressional Subcommittee Reports (Congressional Reports), published in the USA in 2020¹. Both Reports provide detailed evidence of dangerous levels of toxic heavy metals in powdered baby formulas and foods. An example is arsenic, highly toxic in its inorganic form. This poisonous heavy metal

¹ The Staff report by the Subcommittee on Economic and Consumer Policy, Committee on Oversight and Reform, U.S. House of Representatives, February 4 2021: [“Baby Foods Are Tainted with Dangerous Levels of Arsenic, Lead, Cadmium, and Mercury”](https://oversight.house.gov/news/press-releases/oversight-subcommittee-staff-report-reveals-alarming-levels-of-toxic-heavy)
<https://oversight.house.gov/news/press-releases/oversight-subcommittee-staff-report-reveals-alarming-levels-of-toxic-heavy>
and September 29 2021: <https://oversight.house.gov/news/press-releases/oversight-subcommittee-staff-report-reveals-alarming-levels-of-toxic-heavy>

was present even in so-called organic baby foods. Both Reports show “high levels of toxic heavy metals in baby food and the industry’s failure to end harmful practices.”²

These Reports emphasize the grave concern that levels of toxic heavy metals in baby foods and milks create severe health risks to infant and young child health: **“Exposure to toxic heavy metals causes permanent decreases in IQ, diminished future economic productivity, and increased risk of future criminal and antisocial behavior in children. Toxic heavy metals endanger infant neurological development and long-term brain function.”**

Multiple exposures to toxic heavy metals are caused not only by contaminated formulas and foods, but also by contaminated water. Municipal tap water, groundwater or well water is used to reconstitute powdered formulas and cereal foods: it may contain high levels of toxic chemicals. This same water is used for cleaning feeding equipment and for drinking. The risk is increased because powdered formulas and foods prepared with water are the sole or the major source of food and drink at the most vulnerable stage of infant and young child development.

These multiple exposures pose a threat to the health of infants and young children’s health when they are not breastfed. The short-term and long-term survival, and healthy development of infants and young children are threatened by this ‘double dose’ of toxic chemicals.

“Inorganic arsenic, lead, cadmium and mercury are toxic heavy metals. The US Food and Drug Administration and the World Health organization have declared them dangerous to human health, particularly to babies and children, who are most vulnerable to their neurotoxic effects. Even low levels of exposure can cause serious and often irreversible damage to brain development.”

“The Subcommittee’s investigation has pulled back the curtain on the baby food industry, and each revelation has been more damning than the last.”

The second report was published after some companies³ finally complied with the Congressional Subcommittee’s requests to provide information, prompting the above Statement. It explains “Today’s report reveals that companies not only under-report high levels of toxic content in their baby food, but also knowingly keep toxic products on the market ...

² Full Reports:

<https://oversight.house.gov/sites/democrats.oversight.house.gov/files/2021-02-04%20ECP%20Baby%20Food%20Staff%20Report.pdf>

<https://oversight.house.gov/sites/democrats.oversight.house.gov/files/ECP%20Second%20Baby%20Food%20Report%209.29.21%20FINAL.pdf>

³ https://foodsafetytech.com/news_article/house-subcommittee-releases-report-on-dangerous-levels-of-toxic-heavy-metals-in-baby-food/

Manufacturers knowingly sell these products to unsuspecting parents, in spite of internal company standards and test results, and without any warning labeling whatsoever.”

The Statement concludes: “The baby food industry has consistently cut corners and put profit over the health of babies and children.”

IBFAN Calls to Action

IBFAN calls on governments and food safety authorities to take mandatory action - voluntary agreements are not enough:

- **To set maximum levels for heavy toxic metals allowed in baby formulas and foods.**
- **To oblige manufacturers to test for toxic heavy metals in their products, at every stage of manufacturing process including the final stage, that is after the addition of potentially contaminated vitamin/mineral premixes, and to publish the results.**
- **To require manufacturers to report levels of toxic heavy metals on front of pack food labels.**
- **To alert parents and carers to avoid baby formulas and foods that test high levels of toxic heavy metals.**

IBFAN calls on WHO and the World Health Assembly to ensure that the new WHO Global Strategy for Food Safety recognises the double danger of contamination of powdered infant and young child feeding products as well as of the water to reconstitute them.

More information:

Arsenic in soil and water – a double dose for vulnerable infants?

Arsenic in soil and water and cadmium in soil are two examples of the toxic heavy metals cited in the two Congressional Reports. Contamination by inorganic arsenic is less well known than that by lead, another toxic heavy metal. Although lead poisoning has been recognized and legislation enacted in many countries, there is little regulation of arsenic, one of the world’s most toxic elements. Increasing evidence of arsenic or lead contamination of these products as well as of water means babies may receive a double dose of toxic chemicals.

Levels of inorganic arsenic in soil and water are a serious problem in all countries. Water contaminated by arsenic may be used for crop irrigation; arsenic-laden pesticides may contaminate crops. These pesticides poison not only insects but also soil and water. In high-

income countries such as the USA and in low-income countries such Bangladesh, India and Pakistan, arsenic may leach from bedrock into water sources, poisoning wells as well as the ground water used for crop irrigation.

Cereals and rice grown in arsenic-laden water are used to manufacture cereal-based and rice-based baby foods. Many formulas and foods are sweetened with brown rice syrup. Even the supposedly organic brown rice syrup added as a sweetener to formulas and foods may be contaminated by arsenic present in soil and water in many regions where rice is cultivated.

Contamination by cadmium in rice-based baby foods. These foods are not only high in inorganic arsenic, the most toxic form of arsenic, but may also be contaminated with other toxic metals, including lead and mercury as well as cadmium. Cadmium is a toxic trace element that is used as an agricultural fertilizer and is found in microplastics that contaminate farm soil⁴.

Furthermore, the Congressional Reports note that naturally occurring toxic heavy metals may not be the only problem causing the unsafe levels of toxic heavy metals in baby foods.

Many manufacturers are intentionally adding ingredients that have high levels of toxic heavy metals into their products, such as vitamin/mineral pre-mix.

Arsenic in water used to prepare powdered baby formulas and foods

The problem of toxic chemicals and heavy metals in baby foods is not confined to the USA but instead concerns the whole world. The risk to infant health is doubled when these commercial foods are prepared with water that may be contaminated by arsenic or other toxic metals.

Switzerland promotes the purity of its water from Alpine springs. To the Swiss, it is unthinkable that their water could be undrinkable. Yet in many Alpine regions the population is forbidden to drink the municipal tap water, no longer safe to drink because levels of arsenic in water exceed WHO standards for Tolerable Daily Intake (TDI) in drinking water. In other countries, including the USA and Pakistan, arsenic levels are far higher.

This means that infants and young children fed powdered milk and cereal commercial products may be at further risk of cumulative exposures – a double dose of arsenic in the powdered product and in the water used to reconstitute it.

Exclusive breastfeeding protects against arsenic exposures

In March 2022, a newspaper in India falsely projected breastfeeding as a poison because of the arsenic levels detected. IBFAN organized a petition: Don't call mother's milk a poison when it is

⁴ <https://www.ehn.org/plastic-in-farm-soil-and-food-2647384684.html>

in fact nectar: <https://www.change.org/p/stop-feeding-formula-milk-to-newborns-without-the-parent-s-consent-mybabymydecision/u/30300032>

This petition explains that research shows how exclusively breastfed infants and young children are protected against arsenic exposures.

An exclusively breastfed baby does not drink powdered formula and water contaminated by inorganic arsenic. When breastfeeding is continued after 6 months and for up to 2 years and beyond, the intake of contaminated water and formula is reduced. This intake is also reduced when the child's diet is complemented with family foods instead of industrial baby foods in powder form.⁵

A study in the USA published in 2016 compared the contribution to arsenic exposure of formula feeding and breastfeeding. Although the researchers noted that population-wide arsenic exposures measured at 4, 8 and 12 months of age were relatively low, formula-fed infants had higher exposures: "At all three time points, exclusively formula-fed infants had geometric mean arsenic exposures ~ 8 times higher than exclusively breastfed infants owing to arsenic in both tap water and formula powder."⁶ Studies in Bangladesh where there are high arsenic levels in ground or tube well water show that "very little arsenic is excreted in breastmilk...Thus, exclusive breast-feeding protects the infant from exposure to arsenic".⁷

⁵ <https://www.ibfan.org/high-levels-of-arsenic-found-in-baby-formulas-but-breastfeeding-protects-infants-from-exposure-to-arsenic/>

⁶ <https://www.nature.com/articles/jes201569>

⁷ https://www.researchgate.net/publication/51404136_Breast-feeding_Protects_against_Arsenic_Exposure_in_Bangladeshi_Infants