

# *Safer Alternatives to Toxic Chemicals Are Widely Available and in Commercial Use*

## **Toxic**



**TOXIC:** Rubber ducky made from PVC plastic shown to leach hormone-disrupting plasticizers called phthalates. **BANNED** in Europe, California and 14 other countries.



**TOXIC:** Plastic baby bottles shown to leach endocrine-disrupting bisphenol-A. **NOT SOLD:** Whole Foods Markets & concerned retailers.



**TOXIC:** Backpack made from PVC plastic with extremely high levels of lead and possibly phthalates. *While lead paint is banned, lead is currently legal to use in PVC plastic toys as a stabilizer.*

## **Safer**



**SAFER:** Rubber ducky made with plastic free from toxic plasticizer phthalates. **SOLD** in Europe, the United States and around the world.



**SAFER:** Plastic baby bottles made without bisphenol-A or other toxic chemicals.



**SAFER:** Nylon backpack made without lead or toxic plasticizer phthalates.

**Phthalates: Male Reproductive Damage Tops Concerns** - Phthalates are hormone-disrupting chemicals that threaten reproductive health, especially in males. Studies have found that baby boys whose mothers were exposed to high levels of phthalates during pregnancy were more likely to have altered genital development. Animal tests show that phthalate exposure leads to small or otherwise abnormal testes, hypospadias (abnormal urinary openings on the penis) and undescended testes in young males. In adult males, phthalate exposure has been linked to lower sperm counts, reduced sperm motility, and damaged sperm. Other potential effects include reduced female fertility and premature breast development in young girls, liver and kidney damage and asthma. EPA classifies the phthalate DEHP as a probable human carcinogen.

**Lead: Lowered Intelligence and Lifelong Health Effects** - The toxic effects of lead are well documented in both children and adults. Lead causes damaging health effects at extremely low doses, and the main target is the central nervous system. Recent research shows that accumulated bone lead also leaches out faster during pregnancy and breastfeeding, exposing the fetus and infant to higher lead levels. Proven harmful effects include impaired brain development, premature births, smaller babies, learning difficulties, and reduced growth in young children. Children exposed to lead at a young age are more likely to suffer from shorter attentions spans and are less able to read and learn than their peers. Studies in children show that reducing blood lead levels by 10 ug/dL significantly raises the IQ by an average of 2.6 points, which across a large population has a huge effect. The federal government has concluded that lead is anticipated to be a human carcinogen.

**Bisphenol-A: Ultra Low-dose Hormone Disruptor** - Bisphenol A is a potent endocrine disrupting chemical in lab animals at very low doses that is suspected of causing reproductive damage and birth defects that may lead to prostate and breast cancer. Studies have found that BPA can have adverse health effects at levels thousands of times lower than what the EPA considers safe. According to the low dose hypothesis, small and repeated exposures to bisphenol A can have an amplified effect on the human body by mimicking human sex hormones, or promoting cell proliferation. Bisphenol A has been found to cause estrogenic changes in animal cells at the same concentrations that are found in pregnant women and their fetuses. Between 1998 and 2005, 115 studies of BPA were published. None of the 11 studies funded by industry reported adverse effects at low level exposures, whereas 94 of 104 government-funded studies found statistically significant effects on animals. Adverse effects were found at levels to which many people in the U.S. are currently exposed, levels much lower than the EPA's current acceptable level.

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