



Plastics Exposure in Childhood

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Plasticizers such as phthalates and bisphenol A, two chemicals added to plastics to add flexibility and durability, have been in the media recently due to concerns that they may impact children's health. Phthalates are found in many common consumer products such as food packaging, vinyl flooring and wall covering, medical supplies such as intravenous tubing, and personal care products including fragrances, cosmetics and nail polish. Bisphenol A is found in the lining of canned foods and polycarbonate plastics as is found in water bottles, water dispensers and baby bottles.

Due to widespread use, concerns have been raised that children, especially infants and toddlers, may be uniquely vulnerable to developing long term health effects. Since these plasticizers are not chemically bound to the plastics to which they are added, they can leach out of products causing exposure by ingestion of foods found in plastic packaging, children's mouthing of products, breathing in dust generated from these products, or through direct contact with skin.

Measurable concentrations of phthalates and bisphenol A are present today in the bodies of nearly all Americans and children have disproportionately high levels. There is a growing concern that children may be uniquely vulnerable to exposures as they frequently place toys and other plastic products in their mouth, an age appropriate behavior. Animal studies demonstrate that phthalates can affect birth outcomes and the reproductive tract. Studies have demonstrated that the system most sensitive to phthalate exposure is the male reproductive tract. Similar findings have been seen with bisphenol A. Human studies, however, are very limited.

What can you parents do to minimize a child's exposure to plastics?

To minimize exposure to phthalates and bisphenol A parents can:

1. Look for children's products that are marked free of phthalates and/or bisphenol A

2. Avoid placing plastics in the dishwasher and the microwave since high temperatures may promote leaching of the plasticizers
3. Look to recycling labels in the absence of mandatory labeling
 - #3 plastics may contain lead and phthalates
 - #7 plastics may contain bisphenol A
 - Instead, choose plastics that are labeled #1, 2, 4, and 5
4. Select fresh foods rather than canned food products
5. Choose stainless steel water bottles rather than plastic
6. Use glass containers for food storage
7. Wet mop and dust frequently to minimize exposure to phthalates in dust

Reference: American Academy of Pediatrics Committee on Environmental Health. Pediatric Exposure and Potential Toxicity of Phthalate Plasticizers. Pediatrics 2003, Vol. 111, No 6.