

PROMOTING HEALTHY ENVIRONMENTS FOR CHILDREN

Plasticizers



KEY POINTS

- Plasticizers are common additives in plastic and rubber materials. They are used to make the polymers or resins more flexible or rigid.
- Commonly used plasticizers include phthalates and bisphenol A (BPA).
- Plasticizers may leach from products causing adverse effects on human health. This is a particular concern in plastic products used for food storage and food preparation.
- Heat can cause or increase the leaching of BPA and phthalates from plastic materials.
- Families can take steps to decrease their exposure to plasticizers.

CLINICAL GUIDANCE

Prevention is key!

- Advise families on ways to reduce exposure to plasticizers:
 - Avoid microwaving food or beverages (including infant formula and pumped human milk) in plastic, if possible.
 - Do not microwave or heat plastic cling wrap. If plastic wrap must be used, ensure that it does not touch the food.
 - Do not put plastic food containers or utensils in the dishwasher.
 - Use alternatives to plastic, such as glass or stainless steel, when possible.
 - Look at the recycling code on the bottom of products to find the plastic type and avoid plastics with recycling codes 3 (phthalates), 6 (styrene), and 7 (bisphenols) unless plastics are labeled as “biobased” or “greenware,” indicating that they are made from plants and do not contain bisphenols.
 - Encourage handwashing with soap and water before handling foods and/or drinks.
 - Wash all fruits and vegetables in cold running water before consuming.
 - Make sure pacifiers and bottle nipples are phthalate- and BPA-free.
 - Buy bisphenol and phthalate-free toys.
 - Prioritize fresh or frozen fruits and vegetables (over canned or processed foods) when possible.
 - Wet dusting/mopping in the home helps remove household dust, where plasticizers and other chemicals can build-up.
 - Choose “fragrance free” personal care products and household products.

- Although low concentrations of BPA have been detected in human milk, breastfeeding a baby is one way to reduce exposure to plasticizers. The American Academy of Pediatrics recommends exclusive breastfeeding for 6 months. Breastfeeding should be continued, with the addition of complimentary foods around 6 months, at least through the first 12 month of age and thereafter as long as mutually desired by the mother and child.

Possible health concerns related to exposure to common plasticizers include endocrine disruption, obesogenic activity, and neurodevelopmental disruption.

BACKGROUND INFORMATION

As technology for creating plastics evolved, chemicals such as phthalates and bisphenol A (BPA) were used to create more economical, accessible containers for food and drink, as well as in hygiene and beauty products. Studies show that these chemicals enter the food, drinks, and products they hold, particularly when heated. Efforts by the US Environmental Protection Agency have led to the classification of many subsets of these chemicals as toxic, requiring appropriate labeling when used in plastics, lotions, toiletries, and cosmetics.

FOR MORE INFORMATION

The following resources offer additional information regarding plasticizers:

- [Pediatric Environmental Health, 4th Edition](#) – AAP Policy Manual
- [BPA Fact Sheet](#) – NIEHS
- [Phthalates Fact Sheet](#) – CDC