Phthalates

Phthalates are chemicals added to plastics to make them more flexible and to cosmetic and personal care products to help retain fragrance and color.

HOW ARE WE EXPOSED TO PHTHALATES?

- Food and Beverages: Phthalates can seep out of plastic containers and be ingested.
- Cosmetics and cleaning products: Soaps, lotions, makeups, cleaning supplies, air fresheners, and other and household products that contain fragrance are likely to contain phthalates.
- Plastics: Toys, shower curtains, carpeting, vinyl flooring, some medical equipment, and other items made with polyvinyl chloride (PVC) contain phthalates which can seep out and accumulate in dust
- Medications: Some coated and time-release capsules have been shown to contain phthalates.

WHAT ARE THE HEALTH EFFECTS OF PHTHALATES?

they interfere with the body's hormone system. Children are exposed to higher levels of phthalates because they are closer to the ground where chemicals settle in dust, often put their hands in their mouths, and ingest more food for their body weight. They are more vulnerable to the health risks of phthalates because their bodies are still rapidly developing.

- Reproductive Health: Phthalates have been shown to interfere with the male hormone testosterone, leading to impaired reproductive development and function.
- Immune System: Childhood exposure to phthalates may increase the risk of allergic diseases including asthma and eczema.
- Brain: Phthalates have been linked to increased risk of autism, hyperactivity, and neurodegenerative diseases such as Alzheimer's and Parkinson's disease.

Phthalates are endocrine disruptors, meaning that

HOW CAN I REDUCE MY EXPOSURE TO PHTHALATES?

- Choose glass or stainless steel food and beverage containers.
- Avoid products made from polyvinyl chloride (PVC) vinyl or labeled with recycling symbol #3.
- Avoid heating plastic (e.g. in the microwave or dishwasher).
- Choose fresh, whole foods and avoid processed and packaged foods.
- Choose fragrance-free personal care products, household cleaners, and other items.
- Choose "3-free" nail polish, which does not contain phthalates.
- Reduce dust with a wet rag, wet mop, or HEPA filter vacuum.

The Consumer Product Safety Commission prohibits the use of eight phthalates at concentrations greater than 0.1% in toys and feeding and teething items intended for children under three years old. There are many other phthalates that are not restricted in consumer products. Companies are not required to inform consumers about phthalates in their products.



Icahn School of Medicine at **Mount** Sinai Institute for Exposomic Research This material was developed through the Mount Sinai Children's Environmental Health Center (www.cehcenter.org) and Transdisciplinary Center on Early Environmental Exposures (tceee.icahn.mssm.edu, NIEHS grant P30ES023515). As part of the Institute for Exposomic Research, we translate and connect our science to supporters and communities committed to ensuring a healthier future for all. To learn more about the Institute's research, visit icahn.mssm.edu/exposomics.



