

NON-TOXIC PRODUCTS

Eco-Healthy Child Care

<https://cehn.org/our-work/eco-healthy-child-care/ehcc-faqs/plastics/>

PLASTICS



BPA

What is bisphenol A (BPA)?

BPA is chemical additive used to make polycarbonate plastic (hard clear plastic) and epoxy resins. Thus, BPA can be found in baby bottles, sippy cups, regular drinking cups, water bottles, and in the linings of canned foods. Human exposure occurs primarily through ingestion (both from diet and from sucking/mouthing plastic items), and through dermal contact. BPA mimics certain human hormones and can thus disrupt the endocrine system, resulting in adverse health effects such as prostate cancer, breast cancer, miscarriages, birth defects, early puberty, low sperm count, hyperactivity and aggressiveness. Traces of BPA can be found in more than 90% of the U.S. population.

How can I reduce children's exposure to BPA?

- When possible, avoid hard, clear plastic items, especially for children's food and drinks. These can often be identified by the recycling code #7 (located on the bottom of the product)



- or “PC” (stands for polycarbonate).
 - Even hard, clear bottles, regular drinking cups
 - or sippy cups that are labeled “BPA-Free” may contain similar compounds, such as BPS or BPF, which may also be harmful.
- Use glass bottles, covered with a silicone sleeve (to protect from breaking), when possible.
 - Use clear silicone nipples. Avoid latex rubber nipples, as they can cause allergic reactions and can contain impurities linked to cancer.
- Avoid plastic bottle liners, as the soft plastic liners may leach chemicals into formula and breast milk, especially when heated.
- Avoid using plastics that aren’t identified on the packaging
- If using infant formula, purchase powdered formula instead of liquid formula sold in metal cans. BPA can leach from the epoxy resin of the metal can lining into the liquid formula. Canadian tests show no BPA leaching into powdered formula. The same brands are sold in the U.S., making powdered formula a low-risk for BPA contamination.
- Never heat or microwave food or drink in any plastic containers (even those labeled “microwavable” or ‘microwave safe”), regardless of the type of plastic.

Phthalates

What are phthalates?

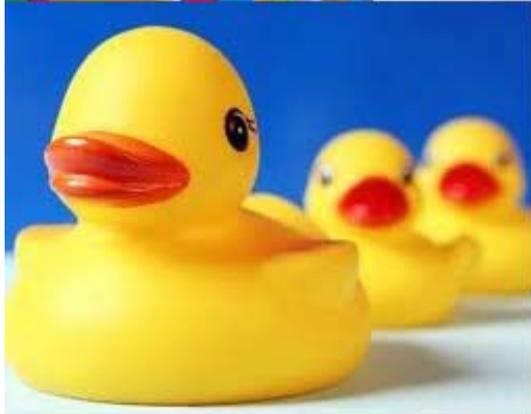
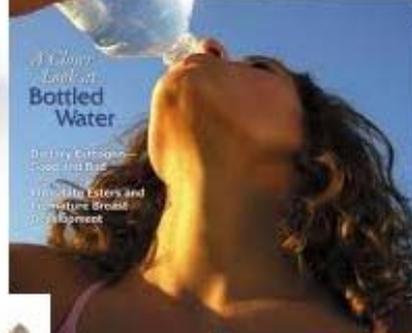
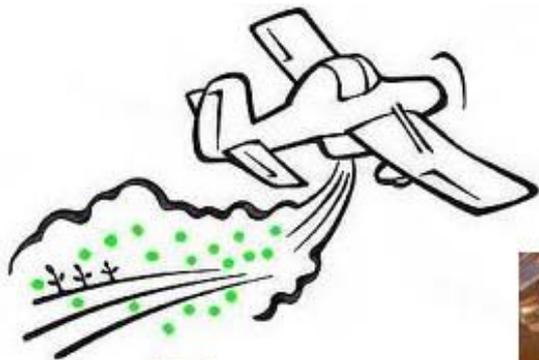
Phthalates (pronounced THAL-ates) are a class of chemicals used to soften plastics, such as PVC (polyvinyl chloride), to bind fragrances in products, and to act as solvents and fixatives. Human exposure occurs through:

Inhalation- breathing in fragrances or fumes from solvents and fixatives.

Ingestion- eating foods that were wrapped in plastic wrap and heated in the microwave or chewing on a toy made with PVC. Chewing on plastic toys creates small openings in the plastic which provides an avenue for chemicals to leach into the child's mouth.

Skin Contact- absorbing phthalates from lotion, perfumes, deodorants, and other scented personal care products.

Adverse health effects include hormone disruption, developmental and reproductive problems, asthma, preterm birth, low sperm count, undescended testes, premature puberty, and development of some cancers.



PVC

What is polyvinyl chloride (PVC)?

PVC plastic, commonly referred to as “vinyl”, is dangerous to human health and the environment throughout its entire life cycle--during the manufacturing and disposal processes, as well as while PVC products are in use. Humans are exposed to the chemicals released during the PVC lifecycle, such as mercury, dioxins, and phthalates, which may contribute to irreversible life-long illness or disability.

What is an example of toxic additives to PVC?

One of the most common toxic additives is Di(2-ethylhexyl) phthalate (DEHP), a phthalate that is a suspected carcinogen and reproductive toxicant readily found in numerous PVC products. Children can be exposed to phthalates by chewing on vinyl toys (dolls, ‘rubber ducky’ chew toys, infants teethingers). Three phthalates, including DEHP, have been permanently banned from some children’s toys and articles, at levels greater than 0.1%, in the U.S. as of February 2009. Three other phthalates have been banned only from those children’s toys and articles that can fit into a child’s mouth.

What are some consumer products with alternatives to PVC and phthalates?

Safer, cost-effective, alternatives, such as bio-based materials or safer plastics, are readily available for virtually every use. You can help build consumer demand for safer, healthier products by avoiding the purchase of PVC or phthalate-containing products.

- If you must use plastic, purchase toys, chew toys, and other children's items that are labeled "phthalate-free" or "PVC-free". Sometimes items containing PVC can be identified by the recycling code #3--PVC or V. Those items should be avoided.



- Make sure to also avoid plastic items (especially baby bottles, sippy cups and regular drinking cups) made with BPA or similar compounds such as BPS and BPF. BPA is found in hard, clear plastic bottles or cups sometimes marked with the recycling code #7--PC. If there is no recycling code, just remember to avoid hard (not flexible when squeezed with a human hand), clear plastics.
- Choose plastic products made from polypropylene or polyethylene. If the product is a baby bottle, make sure that it has clear silicone nipples.
- Even though PVC is commonly referred to as “vinyl”, there is a range of vinyl compounds, some of which are safer alternatives to PVC. They include EVA (ethylene vinyl acetate) and PEVA (polyethylene vinyl acetate).
- When microwaving food or drink never cover food with any plastic, including plastic wrap. Instead, cover food or drinks with a paper towel to avoid splattering.
 - Use PVC-free plastic wrap (buy plastic wrap and bags made with polyethylene).
- Purchase phthalate-free personal care or beauty products.
 - Purchase products with no added fragrances, including personal care products, cleaning products, art supplies, candles, etc. Avoid air fresheners and essential oils.
- Beware of soft flexible plastic products that have a strong, distinct odor. Often these signal the presence of PVC.

PLASTICS RHYME - RIMA DE PLASTÍCO

1, 2, but not 3

4, 5, but not 6

7, 7, what about 7?

Maybe it's good,
maybe it's not.

1, 2, no usa 3

4, 5, no usa 6

7, 7, ¿qué pasó con 7?

Quizás es algo bueno,
quizás es algo malo.

FRAGRANCES

[HTTPS://CEHN.ORG/OUR-WORK/ECO-HEALTHY-CHILD-CARE/EHCC-FAQS/FRAGRANCES/](https://cehn.org/our-work/eco-healthy-child-care/ehcc-faq/fragrances/)

Where are fragrances found and how are children exposed?

Many common household cleaning products, personal care products, air fresheners, and other items, contain fragrances. Examples include scented detergents, hand lotions, lip gloss, candles, incense, and felt-tip art markers. Some fragrances are synthetic (man-made), and others are naturally derived, such as essential oils. Children are exposed to fragrance chemicals primarily through direct skin contact and through the inhalation of some compounds (volatile organic compounds or VOCs) that readily evaporate from the scented product into the air.

What are the dangers of fragrances?

Many synthetic chemicals in fragrances are derived from petrochemicals (petroleum-based), and can be harmful to human health. Chemicals found in man-made fragrances include phthalates, which are endocrine disruptors, and benzene derivatives, aldehydes, and toluene, which are known carcinogens. Some fragrance compounds are neurotoxicants and others are linked with reproductive birth defects. In addition, some children and adults have allergic or hypersensitivity reactions to fragrance chemicals. Allergic and asthmatic children are at especially high risk.

Art and Craft Supplies can contain toxic ingredients that, when used or stored in a play area, create a risk to the health and well-being of children. Lead, asbestos and organic solvents are sometimes used to enhance pigmentation, preserve art products, and to improve application. These toxic ingredients can trigger asthma, allergies, headaches and nausea, especially if used in a poorly ventilated area. Research has shown that some inks, adhesives, pigments and clay may contain chemicals that can cause adverse health effects in adults after occupational exposures. It is through inhalation, ingestion and skin contact that children are exposed.

Are scented candles okay?

Scented candles are popular gifts and enjoyed by many, but harmful fragrance chemicals that are added to them can be released into the air and inhaled by children. In addition, fragrance oils can soften the wax so that the candle does not burn cleanly. Thus, more black soot is emitted from candles containing fragrance than is released from fragrance-free candles. Black soot can not only damage homes and furnishings, it can also be harmful to human health. Soot particles can travel deep into our lungs, exacerbating respiratory illness and disease.

What about “natural” fragrances like essential oils and incense?

Essential oils are often perceived as safer alternatives to synthetic fragrances, and are used in many cleaning products and personal care products advertised as “green” or “all-natural”. However, even though they are naturally-derived (from plants), they are not necessarily safer, as plants can contain many harmful and even toxic compounds. The chemical compounds found in essential oils are highly concentrated and potent, and can also be harmful to human health, causing skin irritations and respiratory distress and even cancer.

Natural incense is often made of plant materials and essential oils. Burning this incense releases volatile organic compounds (VOCs) and also harmful particle pollution into the air. It is best to deodorize by opening a window or placing an open box of baking soda or a small bowl of vinegar somewhere in the room - out of the reach of children.

Health Hazards of VOCs

VOLATILE Organic Compounds

Immediate

- Eye & Respiratory Tract Irritation
- Headaches
- Dizziness
- Visual Disorders
- Memory Impairment

Up to 6 years

- Eye, Nose, and Throat Irritation
- Headaches
- Loss of Coordination
- Nausea
- Damage to Liver, Kidney, and Central Nervous System
- Cancer



WHAT CAN I USE INSTEAD?

- Natural materials (wooden blocks, wooden toys, Montessori materials, cloth dolls, natural fiber baskets, cloth containers and bags)
- Plants in the classroom
- Soap, water and cloth towel
- Baking Soda in a bowl
- Boil orange peels/cinnamon sticks
- “Fragrance Free” labeled products
- Certified non-toxic products

WHAT TO LOOK FOR...



Conforms to
ASTM D 4236
and EN71

BIG TAKE AWAY

Use less plastic

Have less plastic
