

TSCA Reform Needed Now

Congress Must Ensure Important Information about Chemical Use Is Not Hidden from People: **Phthalates**



Phthalates are a class of chemicals widely used to soften plastics, to carry fragrance and scents, and in a wide range of products including construction, automotive, household, apparel, packaging, and medicinal materials. The U.S. National Toxicology Program has concluded that five phthalates, known by their acronyms¹ BBP, DBP, DEHP, DiDP, and DnHP, are all harmful reproductive or developmental toxicants. Visit www.takeouttoxics.org.

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Phthalates Are Found in Almost 100 Percent of People Tested

The widespread use of phthalates in consumer products has resulted in widespread contamination of people: residues of seven phthalates of concern (DEHP, DBP, BBP, DiBP, DiDP, DiNP and DnOP) are found in the majority of Americans tested. Many phthalates are hormone-disrupting chemicals that interfere with the production of the male sex hormone, testosterone, which is necessary for proper development and function of the male reproductive organs. Interference with testosterone activity, especially early in life, may have irreversible effects on male reproduction. Phthalates also have been measured in breast milk, umbilical cord blood and amniotic fluid. Many consumer products containing phthalates are regulated by the EPA, whose existing evaluations of phthalate toxicity are outdated, lack information on use patterns, and do not take into account evidence that no one is exposed to one phthalate at a time. In fact, current law does not even require manufacturers to disclose whether or not products contain

When the Toxic Substances Control Act (TSCA) was enacted in 1976, it was intended to ensure that chemicals are safe throughout their lifecycle, from manufacture to use and disposal. But weaknesses in the law have left the Environmental Protection Agency (EPA) unable to act on known health dangers. Other laws, such as those setting air, water, and workplace safety standards, do not adequately regulate exposure to most chemicals, nor do they address the hazards a chemical may pose over its entire lifecycle. New legislation is needed to rapidly reduce exposure to toxic chemicals, such as phthalates^{1,2}, a class of chemicals used in plastics, personal care products, and other everyday products. Whether inhaled, ingested, or absorbed across the skin, some phthalates may disrupt the body's hormones, causing reproductive health effects. NRDC urges Congress to update TSCA to protect people and the environment from toxic chemicals.

phthalates, leaving regulators and consumers completely in the dark. Even if the EPA had information on where they are used and wanted to regulate phthalates, existing TSCA rules severely limit the EPA's ability to take action.

Some Progress on Phthalates Made by Voluntary Efforts, But We Need Better Regulation

Walgreen's pulled some air fresheners off their shelves, partly in response to an NRDC report which revealed high levels of phthalates in some brands. Household cleaning products manufacturer, SC Johnson, also committed to remove phthalates from its air fresheners and cleaning products and publicly discloses the chemical ingredients in its products. Toy and cosmetic companies have also been able to eliminate phthalates from their products, indicating it is possible to reformulate without the use of dangerous phthalates. But consumer protection should not be left to voluntary actions or piecemeal regulations. We need TSCA reform.



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¹ Including benzylbutyl phthalate (BBP; CAS Registry Number 85-68-7), di-n-butyl phthalate (DBP; 84-74-2), di(2-ethylhexyl) phthalate (DEHP; 117-81-7), di-isodecyl phthalate (DiDP; 68515-49-1 or 26761-40-0), and di-n-hexyl phthalate (DnHP; 84-75-3) which have been identified by an authoritative body as reproductive or developmental toxicant or a carcinogen.

² Other phthalates such as dipentyl phthalate (DPP; 131-18-0), di-isobutyl phthalate (DiBP 84-69-5), di-isononyl phthalate (DiNP; 28553-12-0), di-n-octyl phthalate (DnOP; 117-84-0), di-isohexyl phthalate (146-50-9), dicyclohexyl phthalate (DcHP; 84-61-7), and di-isoheptyl phthalate (71888-89-6) have also been linked to reproductive harm.



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Phthalates

Products Where Phthalates are Found

Phthalates are used to impart flexibility to hard plastics, especially polyvinyl chloride (PVC). PVC is used in building materials, flooring, automotive interiors, furniture, and clothing. Phthalates are also used as adhesives, dyes or inks, and solvents in an enormous range of everyday products including air fresheners, cleaning products and detergents, cosmetics, and personal-care products, such as fragrances and nail polish. Phthalates are also found in pharmaceuticals, medical devices, food packaging, sealants, and printing inks. The specific types and quantities of phthalates used in individual products is not publicly available information and phthalates often do not appear on product labels.

Exposure and Health Risks

Phthalate contamination of food and beverages from packaging materials or processing methods is presumed to be a major route of exposure, but people can also ingest or inhale phthalate-contaminated dust and absorb phthalates across their skin. Because phthalates are not chemically bound to the products they are in, they are released from products with use. The widespread use of phthalates in consumer products has resulted in nearly universal contamination of people's bodies with certain phthalates, which have also been measured in breast milk, umbilical cord blood, and amniotic fluid.

Many phthalates are hormone-disrupting chemicals that interfere with the production of the male sex hormone, testosterone, which is necessary for proper development and function of the male reproductive organs. Interference with testosterone activity, especially early in life, can have irreversible effects on male reproduction. Fetal exposure in male animals has been associated with infertility, decreased sperm count, undescended testes, and malformations of the penis and urethra. When combined at low levels, some phthalates can act together to cause similar harm as seen with exposure to just one phthalate at high levels. Phthalate exposures in humans has been linked to changes in sex hormone levels, altered development of genitals, and low sperm count and quality. Phthalates have also been linked with obesity, reduced female fertility, preterm birth and low birthweight, a worsening of allergy and asthma symptoms, and altered toddler behavior. Other phthalates, like DIDP, have been linked to other types of birth defects.

How Phthalates are Designated and Regulated Now



The European Union's (EU) Chemicals Agency recommends that three phthalates (BBP, DBP, and DEHP) be classified as reproductive toxicants of very high concern and should not be used without specific authorization.

Since 1999, six phthalates (BBP, DBP, DEHP, DiNP, DnOP, and DiDP) have been restricted for use in toys in the EU and at least 14 other countries have banned these phthalates in children's toys. The EU has also banned the use of DEHP, BBP, and DBP in cosmetics.



The U.S. National Toxicology Program concluded that BBP, DBP, DEHP, DiDP, and DnHP all were reproductive or developmental toxicants.

In 2008, Congress directed the Consumer Product Safety Commission to permanently ban in children's toys the use of three phthalates (BBP, DBP and DEHP) and provisionally ban DiDP, DiNP, and DnOP pending further review by the CPSC.

The U.S. Food and Drug Administration issued a safety alert recommending that health care providers limit the exposure of newborn males to di-2-ethylhexyl-phthalate (DEHP) in medical procedures.

The National Academy of Sciences concluded in 2008 that people are exposed to multiple phthalates and that the EPA should be assessing phthalate toxicity using a cumulative risk assessment approach, which considers as a group those phthalates which have been shown to interfere with testosterone production and harm male reproduction.



The State of California has listed the phthalates BBP, DBP, DEHP, DiDP, and DnHP on *Proposition 65* list of chemicals "known to cause birth defects or reproductive harm." And DEHP has also been listed as a carcinogen.

The California Toxic Toys Act, which took effect in January 2009, banned six phthalates (BBP, DBP, DEHP, DiNP, DnOP, and DiDP) in toys intended for children 3-years-old or younger.



Maine has listed 13 phthalates as "chemicals of high concern" for their endocrine disrupting effects and their developmental or reproductive toxicity under its law on Toxic Chemicals in Children's Products.



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