

PHTHALATES



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Introduction: Phthalates were first introduced in the 1920s and quickly replaced earlier forms of additives that make plastics more flexible. In 1931, the commercial availability of polyvinyl chloride (PVC) and the development of di-2-ethylhexyl phthalate (DEHP) began the growth of the phthalate industry.

What it's used for: Phthalates are a family of widely used chemicals that soften PVC plastics to increase their flexibility, transparency, durability and longevity. They are also used in cosmetics, perfumes, and industrial paints and solvents. The annual global use of phthalates is estimated to exceed 3 million metric tons per year. DEHP is the most commonly used phthalate and is used to manufacture a variety of products, including food packaging and medical devices.

Where they're found: Phthalates are found in shampoos, conditioners, body sprays, hair sprays, perfumes, colognes, soap, nail polish, shower curtains, medical tubing, IV bags, house dust, vinyl flooring, wall coverings, food packaging, coatings on time-release pharmaceuticals, industrial paints and solvents. DEHP is the most commonly used phthalate due to its low cost and wide availability.

Health Effects Summary: Animal research has shown that phthalates are [endocrine \(hormone\) disruptors](#) which mean that they can interfere with normal sexual development. Phthalate effects on sexual health and development have been observed in

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recent human studies. Levels of phthalates in house dust have been associated with rhinitis, eczema, and asthma in humans. Higher concentrations of phthalates which have been broken down and excreted in urine are linked with increased waist circumference and insulin resistance in adult males which may then lead to diabetes. Phthalates may influence the development of obesity by disrupting metabolism.

Due to concerns for the health of infants and young children, the Government of Canada, under the Hazardous Products Act, has proposed restrictions on the sale, importation and advertising of soft vinyl children's toys and child care articles that contain the following phthalates: di(2-ethylhexyl) phthalate (DEHP), dibutyl phthalate (DBP), benzyl butyl phthalate (BBP), diisononyl phthalate (DINP), diisodecyl phthalate (DIDP), di-n-octyl phthalate (DNOP). The proposed Canadian *Phthalates Regulations* are in line with current requirements for phthalates in the United States and the European Union. In January 2010 Australia banned all products containing more than 1% DEHP

How we are exposed: People are exposed when phthalates are absorbed into the body through personal care products, ingested in drugs, food, water and dust, as well as from products containing phthalates. Infants can be exposed through infant care products like baby shampoos, lotions and powders and foetuses are exposed in the womb.

What you can do to reduce exposure: Avoid shampoos, conditioners and any other personal care products that list "fragrance" as an ingredient. These fragrances may contain phthalates. Avoid using containers or bags with the recycling Type 3 on them as they may contain phthalates that may be absorbed into foods, drinks or into the environment. Vinyl flooring, and certain types of paints and solvents can also be avoided when building or conducting renovations on homes and other buildings.