



Phthalates (pronounced 'tha-lates') are man-made chemicals. They are common components of everyday items, for example, cosmetics, toys, curtains, food packaging, detergents, medical devices, and many other products. Occurrence of phthalates around us is therefore extensive.

There have been some reports of concerns about effects to health of the public exposed to phthalates. But the studies used extremely high doses of phthalates, very much higher than levels in our homes and the environment. However, to be on the safe side, the EU and UK have taken a precautionary approach and introduced measures to reduce our exposure to phthalates.

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Inhalation and ingestion are the main routes of internal exposure of phthalates. Very small amounts of phthalates can leach out of plastics and building materials to accumulate in dust. As we breathe in dust, we can inhale small amounts of phthalates. Ingestion of phthalates, most particularly of DEHP and DINP, occurs via food and drinks, and from trace amounts leaching out of food packaging. Infants and children have greater likelihood of phthalate ingestion than adults, due to hand-to-mouth behaviour. Exposure by skin contact is also a means of absorption into the body.

Although reports have linked phthalates with cancer, in fact no phthalates hav



female sex hormone oestrogen. There is some evidence that some phthalates may be endocrine disruptors in rodents. However, there is not enough scientific evidence to conclude that any phthalates are endocrine disruptors in humans. However as a precautionary measure the phthalates that are considered to be potential endocrine disruptors are already being phased out across Europe.

There have been several reports in the media warning that there is a link between phthalates and obesity. A study has shown that mice exposed to high doses of certain phthalates became obese. Another study found higher levels of phthalates in the urine of obese children than in children of a



DEHP (di-2-ethylhexyl phthalate)	Possibly carcinogenic to humans At high doses has been shown to harm the reproductive system of rodents	Not permitted for use in cosmetics or toys. Restrictions for use in food packaging. The majority of uses of these phthalates will be phased out over the next few years.
DBP (dibutyl phthalate)	At high doses has been shown to harm the reproductive system of rodents	
BBP (benzylbutyl phthalate)		
DINP (diisononyl phthalate)	No definite risks have been identified for the applications of these phthalates but there are some uncertainties	Restrictions for use in food packaging and toys.
DIDP (diisodecyl phthalate)		
DNOP (di(n-octyl) phthalate)		Restriction for use in toys.
DIBP (diisobutyl phthalate)	Suspected of causing harm to the reproductive system and/or the unborn child at high doses.	The use of DIBP in the majority of applications will be phased out over the next few years.
DMEP (di(methoxyethyl) phthalate or bis(methylglycol) phthalate)	Suspected of causing harm to the reproductive system and/or the unborn child at high doses.	These phthalates are likely to be phased out over the next few years.
DIHP (diisoheptyl phthalate)		
DHNUP (1,2-benzenedicarboxylic acid, di-C7-11 – branched and linear alkyl esters)		



Since the EU considers young children (due to their small size, and to partial development status of their metabolic systems) to be particularly vulnerable to potential reproductive toxicity of phthalates, they decreed exposure of young children to all avoidable sources of phthalates should be reduced. The use of DBP, BBP and DEHP has been banned in toys and childcare articles. DINP, DIDP and DNOP can only be used in toys that cannot be placed in the mouth.

The phthalates DBP, BBP and DEHP are not permitted to be used in cosmetics in the EU and UK.

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