



Di(2-ethylhexyl)phthalate (DEHP)

Why am I being warned about potential exposure to DEHP?



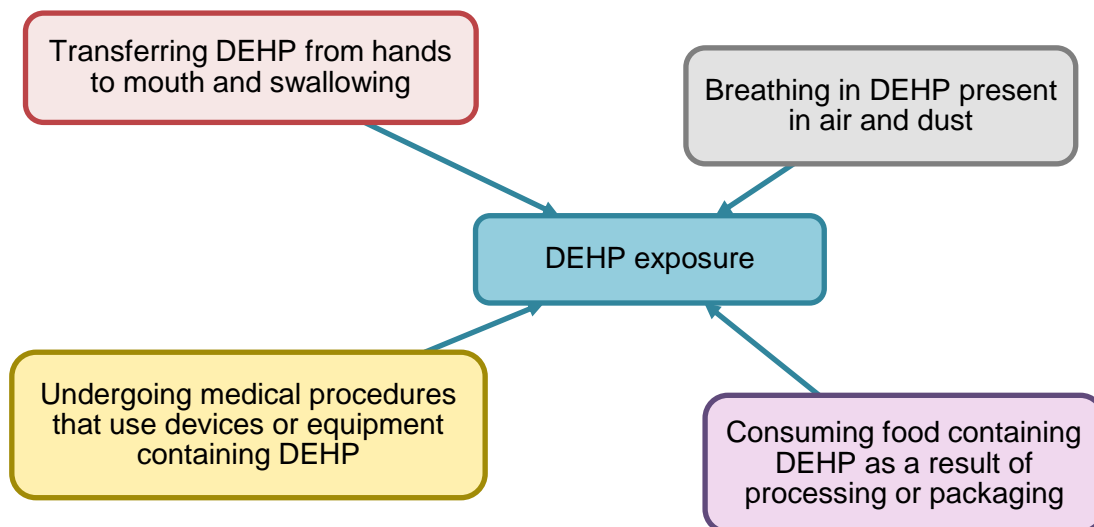
- DEHP is on the [Proposition 65](#) list because it can cause cancer and birth defects or other reproductive harm.
- Exposure to DEHP may increase the risk of cancer, and may also harm the male reproductive system.
- Exposure to DEHP during pregnancy may affect the development of the child.
- Proposition 65 requires businesses to determine if they must provide a warning about exposures to [listed chemicals](#).

What is DEHP?

- DEHP belongs to a family of chemicals called phthalates, which are added to some plastics to make them flexible. In the past, DEHP was one of the phthalates most frequently used in plastic products, but its use has decreased in recent years for a variety of reasons.
- DEHP is still used in various types of plastic consumer products:
 - ▶ Some shower curtains, furniture and automobile upholstery, garden hoses, floor tiles, and coverings on wires and cables.
 - ▶ Some rainwear and shoes.
 - ▶ Some lunchboxes, binders, and backpacks.
 - ▶ Some plastic food packaging materials.
 - ▶ Some medical devices and equipment, including some types of blood and intravenous solution bags, tubing for dialysis, feeding tubes, oxygen masks, and surgical gloves.
- California law prohibits the manufacture, sale, or distribution of children's toys and child care articles containing DEHP at levels greater than 0.1%. US law has a similar prohibition.

How does exposure to DEHP occur?

- DEHP can be gradually released from consumer products into indoor environments such as homes, schools, daycare centers, offices, and cars. It settles on floors and other surfaces, and can accumulate in dust and air.
- Exposure can result from contact with medical devices or during medical procedures where devices or equipment containing DEHP are used.
- Low levels of DEHP have been detected in some foods that have been in contact with plastics during processing and packaging.
- During pregnancy, DEHP can pass from mother to baby.



How can I reduce my exposure to DEHP?

- ❌ Avoid plastics known as polyvinyl chloride (PVC) or vinyl (with recycle code 3).
- ✓ Prior to undergoing medical procedures (especially recurring ones like dialysis) plan ahead by requesting medical devices or equipment that do not contain DEHP. This is especially important for protecting boys from the reproductive effects of DEHP (during pregnancy, in infancy, and around the time of puberty).
- ✓ Minimize exposure to dust, which can contain DEHP:
 - ▶ Wash your hands and your child's hands frequently, especially before preparing food and eating.
 - ▶ Clean floors regularly, using a wet mop if possible, or a vacuum with a high-efficiency particulate air (HEPA) filter.
 - ▶ Wipe up dust regularly, using a damp cloth.
- ✓ Eat more fresh food, and less processed and packaged food.

For more information:

General DEHP Fact Sheets and Resources

- US Department of Health and Human Services (HHS)
Agency for Toxic Substances and Disease Registry (ATSDR)
 - ▶ Toxic Substances Portal-Di(2-ethylhexyl)phthalate (DEHP)
<http://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=65>
- US Food and Drug Administration (FDA)
 - ▶ DEHP in Plastic Medical Devices
<http://www.fda.gov/MedicalDevices/ResourcesforYou/Consumers/ChoosingaMedicalDevice/ucm142643.htm>

Scientific Information on DEHP

- California Environmental Protection Agency (CalEPA)
Office of Environmental Health Hazard Assessment (OEHHA)
 - ▶ Toxicological Profile for Di(2-ethylhexyl)phthalate (DEHP)
http://www.opc.ca.gov/webmaster/ftp/project_pages/MarineDebris_OEHHA_ToxProfiles/DEHP%20Final.pdf
- International Agency for Research on Cancer (IARC)
 - ▶ Di(2-ethylhexyl)phthalate (2013)
<https://monographs.iarc.fr/ENG/Monographs/vol101/mono101-006.pdf>

Proposition 65

- California Environmental Protection Agency (CalEPA)
Office of Environmental Health Hazard Assessment (OEHHA)
 - ▶ Proposition 65: Background
<https://www.p65warnings.ca.gov/faq>
 - ▶ Proposition 65: The Chemical List
<https://www.p65warnings.ca.gov/chemicals>



Benzene

Why am I being warned about potential exposure to benzene?

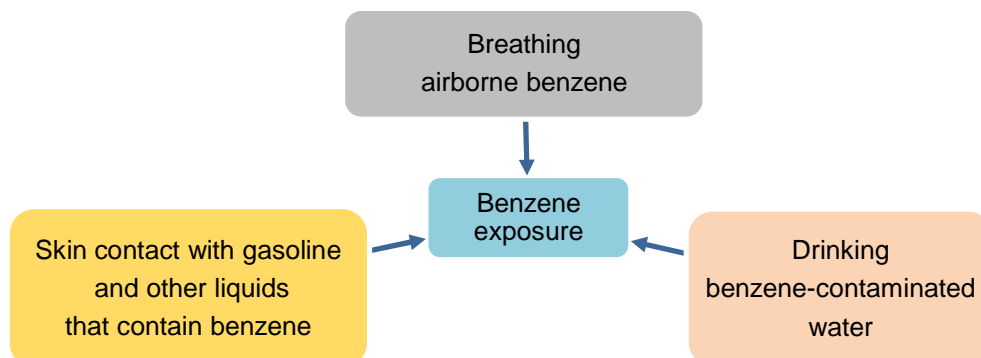


- Benzene is on the [Proposition 65](#) list because it can cause cancer and birth defects or other reproductive harm.
- Exposure to benzene can cause leukemia.
- Exposure to benzene during pregnancy may affect development of the child. It may also harm the male reproductive system.
- Proposition 65 requires businesses to determine if they must provide a warning about exposures to [listed chemicals](#).

What is benzene?

- Benzene is a colorless and highly flammable liquid with a sweet smell. It evaporates into the air quickly.
 - ▶ Benzene, while not in the final product, is used in the manufacture of drugs, dyes, insecticides, plastics, resins, rubber, detergents, and other chemicals.
 - ▶ Benzene is present in natural gas and petroleum products such as crude oil and gasoline.
 - ▶ Gasoline, motor vehicle exhaust and industrial emissions are major sources of benzene in the air.
 - ▶ Tobacco smoke contains benzene.

How does exposure to benzene occur?



- During pregnancy, benzene can pass from the mother to the baby.

How can I reduce my exposure to benzene?

- ⊗ Do not smoke. Do not allow children to breathe tobacco smoke.
- ✓ Limit your and children's contact with gasoline and its fumes.
 - ▶ Pump gasoline carefully to avoid exposure to liquid and fumes. If possible, stand a few steps away from the gasoline-pump nozzle while filling your car.
 - ▶ Limit time spent near idling car engines.
 - ▶ Do not idle car engines in attached garages.
- ✓ Ventilate homes and attached garages well to get fresh air.
- ✓ If you use well water, have it tested for benzene contamination. (If your water comes from a public supplier, it is already tested regularly for benzene).
- ✓ If you think you may have a natural gas leak in your home, such as a low-level leak associated with any natural gas-powered appliance, have it inspected and fixed. If there is a strong gas odor, leave the building immediately.

For more information:

General Benzene Fact Sheets and Resources:

- American Cancer Society
 - ▶ Benzene and Cancer Risk
<http://www.cancer.org/cancer/cancercauses/othercarcinogens/intheworkplace/benzene>
- US Department of Health and Human Services (HHS)
Agency for Toxic Substances and Disease Registry (ATSDR)
 - ▶ Toxic Substances Portal-Benzene:
<http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=38&tid=14>
- US Environmental Protection Agency (EPA)
 - ▶ Benzene:
<http://www3.epa.gov/airtoxics/hlthef/benzene.html#ref4>
- World Health Organization (WHO)
 - ▶ Exposure to Benzene: A Major Health Concern
<http://www.who.int/ipcs/features/benzene.pdf>

Proposition 65:

- California Environmental Protection Agency (CalEPA)
Office of Environmental Health Hazard Assessment (OEHHA)
 - ▶ Proposition 65: Background:
<https://www.p65warnings.ca.gov/faq>
 - ▶ Proposition 65: The Chemical List:
<https://www.p65warnings.ca.gov/chemicals>

Scientific Information on Benzene:

- International Agency for Research on Cancer (IARC)
 - ▶ Benzene:
<http://monographs.iarc.fr/ENG/Monographs/vol100F/mono100F-24.pdf>

- California Environmental Protection Agency (CalEPA)
Office of Environmental Health Hazard Assessment (OEHHA)
 - ▶ Benzene Reference Exposure Levels
<http://oehha.ca.gov/media/downloads/crn/benzenerelsjune2014.pdf>