



ENVIRONMENTAL HEALTH CONCERNS AND TOXIC CHEMICALS WHERE YOU LIVE, WORK, AND PLAY

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COVID-19 is an emerging, rapidly evolving situation.

Get the latest public health information from CDC: <https://www.coronavirus.gov>Get the latest research information from NIH: <https://www.nih.gov/coronavirus>[Home](#) > [Chemicals & Contaminants](#) > Phthalates

Phthalates

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What are Phthalates?

Phthalates are a group of chemicals used to soften and increase the flexibility of plastic and vinyl.

There are phthalates in many consumer products, including:

- Cosmetics and personal care products
- Plastic and vinyl toys
- Shower curtains
- Miniblinds and wallpaper
- Vinyl flooring
- Raincoats
- Food packaging and wraps
- Detergents
- Adhesives
- Plastic pipes
- Medical equipment and devices
- [Polyvinyl chloride \(PVC\)](#) plastics

Phthalates had been used to make pacifiers, soft rattles, and teething rings, but have not been allowed in those products since 1999.

See also: [Brownfield](#) [Food and Cooking](#) [Healthcare Services](#) [Homes](#) [Drinking Water](#) [Learning and Developmental Disabilities](#)[Reproductive Health](#)

Where are Phthalates found?

- Consumer products – many plastic, vinyl, and personal care products are phthalate sources
- Food and water – food or water packaged in plastic, or contaminated water can be phthalate sources
- Air – vapors or dust contaminated with phthalates

How can I be exposed to Phthalates?

Phthalates commonly enter(s) the body through:



Ingestion (swallowing)

- Eating food or water packaged in plastic, or drinking water contaminated with phthalates; for children, chewing on soft vinyl toys or products made with phthalates



Inhalation (breathing)

- Breathing dust in rooms with plastic miniblinds, wallpaper, or flooring that contain phthalates



Skin contact

- Touching or using products made with phthalates

What happens when I am exposed to Phthalates?

The health effects and danger of phthalate exposure are not yet fully known but are being studied by several government agencies.

One phthalate, Di (2-ethylhexyl) phthalate (DEHP), is an endocrine disruptor and can cause cancer.

Some phthalates may adversely affect human reproduction or development.

Who is at risk for exposure to Phthalates?

- Consumers
 - Many consumer products are made with phthalates.
- Infants and children
 - Many children's toys and products are made with phthalates.
- Medical patients
 - Dialysis patients, hemophiliacs, or people who received blood transfusions may be exposed to tubing or containers made with phthalates.

Reduce your risk

If you think your health has been affected by exposure to phthalates, contact your health care professional.

Always wash your hands thoroughly after handling chemicals. For poisoning emergencies or questions about possible poisons, please contact your local poison control center at 1-800-222-1222.

Evaluate



Avoid and Address



Protect Children



External links

Additional Resources

- [Consumer Guide: Phthalates and Bisphenol A](#)
Pediatric Environmental Health Specialty Units
Consumer guide to phthalates and bisphenol A that addresses sources of phthalate exposure, phthalate health effects, and how to protect yourself from phthalates in consumer products.
- [Phthalates Factsheet](#)
Centers for Disease Control and Prevention
Information on phthalates, including sources of exposure, health effects, levels of metabolites in the US population, and links to additional resources.
- [Di\(2-ethylhexyl\)phthalate \(DEHP\). ToxFAQs](#)
Agency for Toxic Substances and Disease Registry
Factsheet with answers to most frequently asked questions about di(2-ethylhexyl) phthalate (DEHP) exposure and its effect on human health, developed by a federal public health agency that protects communities from harmful health effects related to exposure to natural and man-made hazardous substances.
- [Di-n-octylphthalate \(DNOP\). ToxFAQs](#)
Agency for Toxic Substances and Disease Registry
Factsheet with answers to most frequently asked questions about di-n-octylphthalate (DNOP) exposure and its effect on human health, developed by a federal public health agency that protects communities from harmful health effects related to exposure to natural and man-made hazardous substances.
- [Di-n-butyl Phthalate. ToxFAQs](#)
Agency for Toxic Substances and Disease Registry
Factsheet with answers to most frequently asked questions about di-n-butyl phthalate exposure and its effect on human health, developed by a federal public health agency that protects communities from harmful health effects related to exposure to natural and man-made hazardous substances.
- [Diethyl Phthalate. ToxFAQs](#)
Agency for Toxic Substances and Disease Registry
Factsheet with answers to the most frequently asked questions about diethyl phthalate exposure, and its effect on human health, developed by a federal public health agency that protects communities from harmful health effects related to exposure to natural and man-made hazardous substances.
- [Cosmetics - Phthalates](#)
Food and Drug Administration
Information on phthalates used in cosmetic products, and their potential effects on human health, including a 2010 survey from the FDA.
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Science Classroom (Grades 6-8)

Enhance your education on toxic chemicals in our environment using lesson plans, games and activities, videos, informational websites, and more.

[Phthalamon: Phthalates and Your Health](#)

National Library of Medicine

This lighthearted animation tackles phthalates, the chemicals used to make plastics more durable and flexible, and the risks they present to human health.

[Super Mallio Brothers](#)

National Library of Medicine

This parody on a classic video game teaches students about the dangers of the chemicals used in the production of plastics for the environment and human health.

[U.S. National Library of Medicine](#)

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