Phthalates, BPA, and BPS

Phthalates, BPA, and BPS are some of the environmental exposures that influence our health throughout our lifetime. All of these environmental exposures together make-up our exposome.

What?

What are they?

Phthalates are a group of chemicals used to soften plastic and make it more flexible, and to create vinyl. Phthalates are also used when making fragrances.

Bisphenol A and S (BPA, BPS) are used to manufacture polycarbonate plastics and epoxy resins like those found in water bottles, baby bottles, and other beverage and food containers as well as the coating inside cans used to store food and drinks.

Where?

Where are we exposed to them?

Phthalates and BPA/BPS may be found in:

- Shower curtains
- Personal care products
- Cosmetics
- Fragranced products
- Vinyl flooring
- Sales receipts
- Plastic containers for storing food
- Plastic toys
- Food & beverage cans & packaging
- Grease resistant food wrappers



How?

How are we exposed to them?



By mouth:

From food or water that is packaged or heated in plastic or cans

From chewing on soft vinyl or plastic toys made with phthalates or BPA/BPS

Handling receipts treated with BPA/BPS to stabilize the ink (and then touching the mouth)

By inhaling:

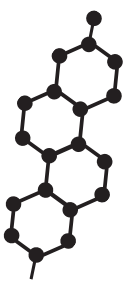
Fumes from products that contain phthalates, e.g., detergents, shower curtains, or new vinyl flooring

By touch:

Phthalates can enter through the skin when using products like lotion, shampoos, soaps, and perfumes

More >

How do they affect our health?



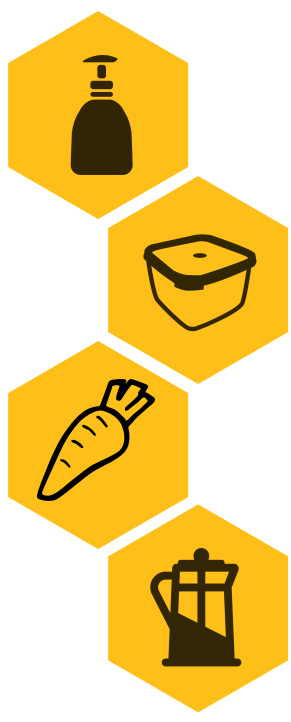
Both phthalates and BPA/BPS are suspected to be hormone disruptors. Hormone disruption can be especially harmful during critical periods of growth, so exposures in the womb and during infancy, childhood, and adolescence are more likely to affect health.

Human studies link phthalate, BPA and BPS exposure to a variety of health outcomes, such as fertility problems, respiratory diseases, childhood obesity, behavioral outcomes, and increased susceptibility to breast and prostate cancer.

If I'm worried about phthalates, BPA, and BPS, what can I do to avoid them?

Scientific studies take a very long time to fully understand and prove the health effects of a chemical. In the meantime, if you want to play it safe, here are some tips to avoid exposure:

- Read the labels of products, and avoid the use of products that use phthalates. Some common phthalates are listed as: BBP, DBP, DEHP, DEP, DiDP, DiNP, DnHP, DnOP.
- Avoid the use of PVC (vinyl) products and flexible plastics.
- Use personal care products that are labeled as "fragrance free", "phthalate free", and "BPA free".
- Use fresh produce that has never been stored in plastic.
- Microwave food in glass or ceramic containers instead of plastic.
- Brew coffee using a French press or non-plastic pour over coffee maker



Additional Resourcs

The National Institute of Environmental Health Sciences

Pediatric Environmental Health Specialty Units

Phthalates

BPA

HERCULES EXPOSOME RESEARCH CENTER

Learning how environmental exposures affect health and community well-being.

https://emoryhercules.com/

EMORY UNIVERSITY

HERCULES is supported by the National Institute of Environmental Health Sciences (Grant #P30ES019776)

Icon credits from the Noun Project: Fast Food by Smalllike , bathtub by Llisole, Sunscreen by Pawinee E., Toy by @w@n !cons, breathe by monki, touch by heathersabrin, Tupperware by Fabio Nucatol, French Press by Baboon designs