

Bisphenol A (BPA)

What is BPA?

Bisphenol A (BPA) is a chemical commonly used in some types of plastics, food container liners, and other consumer products.

BPA can be found in household items and products such as:

- Food storage containers (plastic, cardboard, metal cans).
- Plastic bottles, including older plastic baby bottles that were made before 2013.
- Thermal receipt paper.
- Chemical hair relaxers and straighteners.
- Polycarbonate plastics (used in some CDs, plastic dinnerware, car parts, toys).

Who is most at risk of exposure and health risks?

- Pregnant people and unborn children are at risk because BPA can easily cross the placental barrier and pose developmental concerns for the unborn child.
- Infants and young children are most at risk because they are closer to the ground and are more likely to breathe in and inadvertently eat dust. Children's smaller body size and developing organs can also place them at higher risk of having negative health consequences.

How can pregnant people be exposed to BPA?

- The largest source is typically through eating food from food storage containers (plastic, metal can, or cardboard) that contain BPA in the plastic or lining inside of the cans and cardboard containers.
- Using personal care products that contain BPA on your hair and/or skin.
- Handling thermal receipt paper.
- Exposure may also occur from your environment. BPA can be detected at low concentrations in both indoor and outdoor air, in surface water, and in house dust.

How can infants and children be exposed to BPA?

Exposure can occur from:

- Breast/chest feeding from a parent who has been exposed to BPA. However, breast/chest feeding has nutrients that are needed for infant development and MDH continues to recommend breast/chest feeding as the healthiest option for feeding infants. The numerous health benefits of breast/chest feeding appear to outweigh potential harm from exposure to environmental chemicals in breast/chest milk (See [Breastfeeding, Environmental](#)

[Exposures/Toxicants, CDC \(https://www.cdc.gov/breastfeeding-special-circumstances/hcp/exposures/?CDC_AAref_Val\)](https://www.cdc.gov/breastfeeding-special-circumstances/hcp/exposures/?CDC_AAref_Val)). If you are concerned, talk with your health care provider.

- Using older baby bottles (made before 2013) that contain BPA.
- BPA was once common in plastic baby bottles and products specifically for children. In an effort to reduce BPA exposure to infants and children, Minnesota, other states, and the federal government put in place bans on BPA between 2009 and 2013 (See [Legislative Bans of BPA, MDH \(https://www.health.state.mn.us/communities/environment/risk/chemhazard/bpalaw.html\)](https://www.health.state.mn.us/communities/environment/risk/chemhazard/bpalaw.html)).
- Eating foods from cans or containers that contain BPA.

What can be done to reduce exposure to BPA?

- Avoid containers and products that contain BPA. This includes older plastic baby bottles (made before 2013) and food packaging that may contain BPA resin in the container liners.
- Some, but not all, plastics with recycle code 7 could contain BPA.
- Switch to fresh/frozen food instead of canned, or choose BPA-free cans, if available.
- Consider microwaving food or beverages in glass/ceramic containers.
- Request electronic receipts instead of paper receipts.
- Read hair product labels to ensure they are BPA-free. If you are unsure, you can contact the company.
- A breast/chest feeding person can reduce their infant's exposure by using the tips above to reduce their own exposure. MDH does not recommend that you stop breast/chest feeding, even if you are concerned about BPA. The numerous health benefits of breast/chest feeding appear to outweigh potential harm from exposure to environmental chemicals in breast/chest milk. If you are concerned, talk with your health care provider.
- Wash your hands frequently before preparing meals or eating.
- Vacuum your living spaces and clean out air ducts to reduce exposure to BPA that may be in dust particles.

What are the health concerns of BPA?

BPA exposure is a potential health concern because it is a type of chemical that can disrupt the endocrine system (which regulates hormones in the body) by acting like a hormone or by changing the way hormones act. These health effects pose a concern for human health and are important to consider, especially for children. Children are more vulnerable than adults, and their exposure may be higher because of frequent hand-to-mouth activity.

Studies in rodents have shown that BPA may cause harm to:

- Fetal and infant development.

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- Adolescent development during puberty.
- Male and female reproductive organs and functions.
- Organs such as the liver, kidney, and thyroid.

Many of the BPA studies designed to meet global regulatory requirements have reported effects in animals only at doses far higher than those most Minnesotans receive.

- Human health effects from BPA at low levels of exposure have not been considered conclusive and require more research.
- Organizations, such as the National Institutes of Health (NIH), the U.S. Food and Drug Administration (FDA), and the European Food Safety Authority (EFSA), among others, continue to evaluate BPA and the impact of its use in consumer products on health and safety.
- MDH continues to monitor developments in BPA research.

Addition resources

[EPA | Biomonitoring – Bisphenol A](https://www.epa.gov/americaschildrenenvironment/biomonitoring-bisphenol-bpa)

(<https://www.epa.gov/americaschildrenenvironment/biomonitoring-bisphenol-bpa>)

[FDA | Bisphenol A \(BPA\): Overview & Updates](https://www.fda.gov/food/food-packaging-other-substances-come-contact-food-information-consumers/bisphenol-bpa) (<https://www.fda.gov/food/food-packaging-other-substances-come-contact-food-information-consumers/bisphenol-bpa>)

[FDA | Bisphenol A \(BPA\): Use in Food Contact Application](https://www.fda.gov/food/food-packaging-other-substances-come-contact-food-information-consumers/bisphenol-bpa-use-food-contact-application) (<https://www.fda.gov/food/food-packaging-other-substances-come-contact-food-information-consumers/bisphenol-bpa-use-food-contact-application>)

[MDH | Bisphenol A in Drinking Water \(PDF\)](https://www.health.state.mn.us/communities/environment/risk/docs/guidance/gw/bpainfosh eet.pdf)

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[MDH | Bisphenol A](https://www.health.state.mn.us/communities/environment/risk/chemhazard/bisphenola.html)

(<https://www.health.state.mn.us/communities/environment/risk/chemhazard/bisphenola.html>)

[PCA | BPA and BPS in thermal paper](https://www.pca.state.mn.us/business-with-us/bpa-and-bps-in-thermal-paper) (<https://www.pca.state.mn.us/business-with-us/bpa-and-bps-in-thermal-paper>)

[NIH | Bisphenol A \(BPA\)](https://www.niehs.nih.gov/health/topics/agents/sya-bpa) (<https://www.niehs.nih.gov/health/topics/agents/sya-bpa>)

Minnesota Department of Health

[Toxic Free Kids Program](#)

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