

The Problem with Plastics



More than 10,000 chemicals are incorporated into food and its packaging materials in the United States. Among these chemicals, many are recognized carcinogens and have been associated with negative health outcomes. Oversight of plastics is presently restricted in the United States, and assessments of food additives and contaminants generally overlook the combined impacts of other chemical exposures.

Numerous chemicals have adverse effects by disrupting hormonal signals, known scientifically as 'endocrine disruptors.' Endocrine Disrupting Chemicals (EDCs) can interfere with the body's hormonal systems, leading to developmental, reproductive, neurological, and immune dysfunctions. These disruptors are present in various everyday products, including plastic bottles, metal food can linings, detergents, flame retardants, toys, cosmetics, thermal receipts, and pesticides.

Esteemed professional societies such as the Endocrine Society, the World Health Organization, the International Federation of Gynecology and Obstetrics, and the American Academy of Pediatrics have cautioned about the safety of chemicals found in plastics.

CHEMICALS IN PLASTICS TO AVOID:

1. **Phthalates, commonly found in household items, children's toys, oral medications, food wrapper linings, and personal care products, are potent Endocrine Disrupting Chemicals (EDCs).**
2. **Bisphenols like bisphenol A and S (BPA, BPS) are essential components of hard see-through plastics (polycarbonates) and polyvinyl chloride (PVC). These substances can leach into food and water, especially under heat exposure, and may affect unborn infants as they can cross the placenta.**
3. **Perfluoroalkyl chemicals (PFCs) are utilized in grease-proof paper and packaging, including sandwich and pastry wrappers, french fry bags, pizza boxes, candy wrappers, and various paper and paperboard products.**
4. **Perchlorate serves as an antistatic agent in plastic packaging used for dry foods.**

5. **Polyvinyl chloride (PVC, 3) encompasses most commercial cling wrap, bottles used for cooking oils, and certain water bottles.**
6. **Polystyrene (PS, 6) comprises disposable plastic cups, bowls, and the majority of colored plastic utensils. Plastics labeled as 7 are frequently polycarbonate (PC) plastics containing BPA, including most clear plastic baby bottles, five-gallon water jugs, clear plastic sippy cups, clear plastic utensils, and hard plastic cups and bottles (e.g., Nalgene and Lexan bottles).**

In summary: Steer clear of plastics marked as 3, 6, and 7.

WHAT ABOUT PLASTICS LABELED AS BPA-FREE?

It is advisable to refrain from drinking from plastic water bottles and cups, whether they are disposable or reusable. While products labeled as BPA-free may seem safer, they often utilize alternative compounds such as bisphenol S (BPS), bisphenol F (BPF), or fluorene-9-bisphenol (BHPF). These substitutes also exhibit endocrine-disrupting characteristics and can leach into the contents of the container. For complete peace of mind regarding the absence of bisphenol and microplastics (microscopic plastic particles found in over 90% of water bottles), it is best to avoid plastic bottles altogether.

WHAT ARE SAFER ALTERNATIVES AND STRATEGIES TO MINIMIZE EXPOSURE?

Chemical migration into food is more probable when plastics are subjected to high temperatures, abrasive cleaning agents, and fatty substances. If you opt for plastic bottles or containers with plastic



linings, it's advisable to refrain from dishwashing them, using them for hot beverages, or continuing their use if they display signs of deterioration. To ensure safety, consider following the recommendations outlined on the subsequent page.

1. Consider alternatives. Opt for glass, ceramic, or stainless steel containers over plastic bottles and food storage options. Waxed brown paper also serves as a reliable alternative for carrying lunches.
2. Check labels. Seek out products labeled as "PVC free" to minimize exposure to harmful chemicals.
3. Avoid microwaving plastics. Heat accelerates chemical release from plastic into food. Instead, microwave meals in ceramic or glass containers.
4. Choose paper over cling wrap. Utilize waxed paper for storing foods, especially those high in fat. Before transferring wrapped cheeses, remove the outer layer to minimize exposure to harmful substances.
5. Discard questionable plastics. Discoloration, cracks, or signs of wear indicate potential degradation and leaching of chemicals into food. Replace old plastic containers with glass or ceramic alternatives.
6. Minimize plastic contact time. Reduce chemical leaching by promptly transferring food from plastic containers to alternatives after purchasing from the store.
7. Hand-wash plastic items. Despite claims of being dishwasher safe, repeated dishwashing can prompt BPA leaching. Clean plastics manually with warm water and mild detergent to preserve integrity.

8. Opt for glass or stainless steel bottles. Choose glass or stainless steel drinking vessels, especially for children, and avoid water from large plastic coolers. Filtered water is recommended.
9. Bulk purchasing. Health food stores often offer bulk items packaged in non-toxic materials. Transfer bulk purchases to glass containers at home to further reduce plastic exposure.

Increases SHBG

BEST: Glass, stainless steel, ceramic

Less toxic choices if choosing plastic:

- #1: Polyethylene terephthalate (PETE)
single use - do not reuse
- #2: High-density polyethylene (HDPE)
- #3: Low-density polyethylene (LDPE)
- #4: Polypropylene (PP)

Reducing our reliance on plastics benefits both our health and the environment. Plastic degradation takes over 400 years, resulting in persistent environmental pollution. Out of the 8.3 billion metric tons produced, a staggering 6.3 billion metric tons has become plastic waste, with only 9% recycled. The majority, 79%, accumulates in landfills or pollutes the environment, including oceans. Additionally, plastics manufacturing contributes significantly to air pollution. Transitioning away from plastics whenever feasible not only enhances personal well-being but also fosters environmental preservation.

References

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