

Plastics and Hormones

A Factsheet from the Neighborhood Network

Did you know that it's not a good idea to microwave food or your morning coffee in a soft plastic container or styrofoam? Or that it may be harmful to allow your infant to chew on soft plastic toys? The reason why is that certain plastics contain carcinogens, and/or phthalates. Phthalates make the plastic malleable, but also are known endocrine disruptors. That means they can interfere with your hormonal system which controls many functions in the body, including reproduction. To be safe, it is better to avoid plastics and always store food in glass or metal containers. Use a ceramic mug to heat beverages, and air out new cars—that "new car smell" is phthalates!

See the chart on the back for important information on the different varieties of plastics commonly used. Plastics are typically classified by one of seven recycling codes, indicating the type of resin used (the code is usually found at the bottom of containers and bottles).

Other Problems with Plastics:

Dioxins

Dioxins are carcinogenic substances produced when plastics are manufactured and incinerated, and break down slowly in the environment. An EPA report estimated that the average American's risk of contracting cancer from dioxin exposure may be as high as 1 in 1,000. Dioxins are also endocrine disruptors.

Pollution

Producing a 16 oz. plastic bottle generates more than 100 times the toxic emissions to air and water than making the same size bottle out of glass. However, when you do choose plastic containers, choose those that are accepted for recycling in your area.

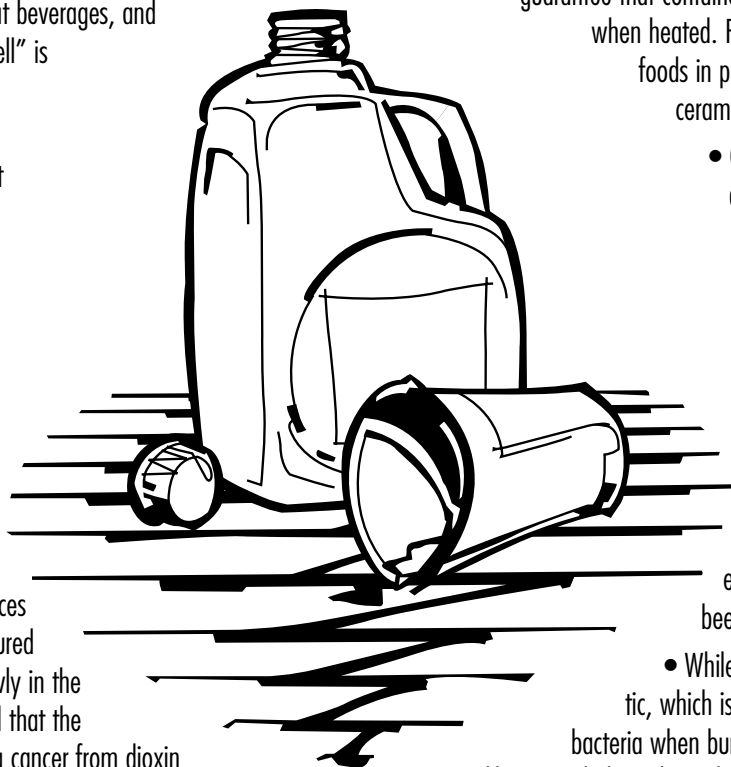
Petroleum - A Non-Renewable Resource

Plastics are made of petroleum, a non-renewable resource. Fossil fuels take millions of years to form, they are a finite and, ultimately, an exhaustible energy resource. The USA, the world's second largest oil extractor, uses nearly 30% of all oil extracted each year. By choosing to use non-plastic packaging, we can conserve this valuable resource and reduce our dependence on oil.

Tips and Suggestions to Avoid Exposure

- Glass, ceramic and stoneware are the safest options when it comes to food packaging and storage because they do not leach any questionable chemicals when in contact with food.
- Avoid heating food in plastic containers. Also, while a "microwave-safe" or "microwavable" label on plastic containers only means that they shouldn't melt, crack or fall apart when used in the microwave, the label is no guarantee that containers don't leach chemicals into foods when heated. For safety's sake, it's best not to heat foods in plastic, and use ovenproof glass or ceramic containers.
- Containers made from stainless steel are an environmentally friendly choice not only because the material is 100% recyclable, but also because stainless steel is easy to clean without any harsh chemicals. Stainless steel is also inexpensive, attractive, and will not react with foods during cooking. While aluminum is recyclable and relatively inexpensive, its extraction is highly energy intensive, and aluminum has been associated with Alzheimer's disease.
- While still in its infancy, biodegradable plastic, which is often starch-based, is decomposed by bacteria when buried in soil. Biodegradable plastics look like normal plastic bags, but they take from 18 months to three years to decompose, unlike plastic bags, which can take up to 100 years.
- Write a letter to manufacturers of food and drinks packaged in plastics, indicating your concern about plastics and tell them you are actively seeking products packaged in safe, reusable glass, metal and recycled paper.

The above is adopted from Plastics for Kitchen Use by "The Green Guide." For further information, see www.epa.org, or contact The Green Guide's Manhattan office at 212/598-4910, or see www.thegreenguide.com.



Less Safe Plastics



Polyvinyl chloride (V or PVC) — Most cling-wrapped foods sold in delis are wrapped in PVC. To soften #3 PVC plastic into its flexible form, manufacturers add "plasticizers" during production. Traces of these chemicals, known as adipates and phthalates, can leak out of PVC when it comes in contact with foods.

According to a National Institutes of Health report, di-2-ethylhexyl phthalate (DEHP), commonly found in PVC plastics, is reasonably anticipated to be a human carcinogen. While DEHP is not expected to cause harmful health effects in humans at the levels found in the environment, reproductive problems, birth defects and damaged sperm did occur in animals with prolonged exposure.



Polystyrene (PS) — usually found in styrofoam containers, cups and plastic cutlery. PS may leach styrene, which is considered a possible human carcinogen by the World Health Organization's International Agency for Research on Cancer, and may also disrupt hormones.



Other (usually polycarbonate) — Many #7 polycarbonate bottles are made with bisphenol-A, which many studies have evaluated as a hormone disruptor which can leach into food in cans or from polycarbonate bottles as they age. A 1998 study in Environmental Health Perspectives found that bisphenol-A simulates the action of estrogen when tested in human breast cancer cells. Polycarbonate is usually found in baby bottles, 5-gallon water bottles (such as office water dispensers!), microwave ovenware, and lining in food cans. Beware: about 95% of all baby bottles currently on the market are made of polycarbonate. It's a good idea to call the manufacturer and ask if bisphenol-A is in your plastic product.

Safer Plastics

The following plastics are **not** known to leach any chemicals that are suspected of causing cancer or disrupting hormones:



Polyethylene terephthalate (PET or PETE) — (soft drink, water and sports drink bottles, ketchup and salad dressing bottles, and peanut butter, pickle, jelly and jam jars)



High density polyethylene (HDPE) — (milk, water and juice bottles, yogurt and margarine tubs, cereal box liners, and grocery, trash and retail bags)



Low density polyethylene (LDPE) (Some bread and frozen food bags and squeezable bottles)



Polypropylene (PP) — (yogurt and margarine tubs)