Plastic Plagues

On average, we consume more than 1.3 million tones of plastic each year – more than 71kg per person! Much of our food and drink comes in contact with plastic everyday, but not all plastics are safe. While plastic food wraps and containers can be important in protecting our food, recent studies show that when certain plastics come into contact with foods, some questionable chemicals migrate from the packaging to the foods.

Know Your 7 Plastic Codes:

Code #1 - PET or PETE (polyethylene terephthalate)
Typical Product Application*:* Soft drink bottles, medicine containers
Recyclable? Yes
Code #2 - HDPE (high-density polyethylene)
Typical Product Application*:* Toys, bottles for milk, water, detergent, shampoo, motor oil
Recyclable? Yes
Code #3 - PVC (polyvinyl chloride)
Typical Product Application*:* cordial, cooking oil, shampoo & detergent bottles, pipe & tubing, meat wrap.
Recyclable? Yes
Code #4 - LDPE (low-density polyethylene)
Typical Product Application*:* Soft, flexible plastic as used in garbage bags, wrapping films, grocery bags
Recyclable? No.
Code #5 - PP (polypropylene)
Typical Product Application: Hard, but flexible. Used in ice cream & yogurt containers, potato crisp bags, drinking straws, syrup bottles, diapers
Recyclable? No.
Code #6 - PS (polystyrene)
Typical Product Application*:* Rigid, brittle plastic. Coffee cups, take-out food containers, meat trays, plastic cutlery
Recyclable? No.
Code #7 - Other (including polycarbonate, nylon and acrylic)
Typical Product Application*:* Baby's bottles
Recyclable? No

Plastics Impact on our Health and the Environment:

Health:

a) ***Dioxins.*** Dioxins, which are highly poisonous even at low doses, are produced when plastics are manufactured and incinerated. Various official reports have concluded that dioxins have the potential to produce an array of adverse health effects in humans, including hormone and immune system disruption, skin diseases and cancer.

b) ***Phthalates.*** Phthalates are "plasticizers" linked to a variety of birth defects and is reasonably anticipated to be a human carcinogen. Most cling-wrapped meats, cheeses and other foods bought from shops are wrapped in PVC. The "plasticizers" are used in the manufacture of #3 PVC plastic to soften it into its flexible form. Traces of these chemicals, known as adipates and phthalates, can leak out of PVC when it comes in contact with foods. Phthalates are also widely used in cosmetics and beauty products, including nail polish.

c) ***Bisphenol A***. Plastic food and drinks containers are a great concern due to the safety issue around low-dose effects of bisphenol A (BPA). Bisphenol A (BPA) was invented in the 1930s during the search for synthetic estrogens. Many #7 polycarbonate bottles are made with bisphenol A (BPA). It is the chemical

used to make hard, clear plastics such as those found in baby bottles, food-storage containers and the lining of soft drink cans. BPA is also used in the manufacture of epoxy resins and various other plastics. Chemical bonds that BPA forms in plastic can unravel when heated, washed or exposed to acidic foods, or as the container ages generally. This creates chemical contamination of the food or drink. Many studies have evaluated BPA as a hormone disruptor, a chemical that alters the body's normal hormonal activity. Our bodies are extremely sensitive to sex hormones, and miniscule amounts can induce profound changes.

*d) **Antimony**.* In an effort to be healthier, we are turning to bottled water on mass. The purity of the water in these commercial waters brands bottle aside, the leaching effect of plastic into water may be an issue. #1 PETE plastic water bottles have been shown to leach antimony into water. It is important to remember that leaving water in any plastic bottle for a prolonged period of time allows for chemical leaching to occur.

Environment -

a) Plastics contribute to a huge amount of solid waste. While plastic recycling continues to grow, there is still significant waste. And not all plastics can be recycled.

b) There are certainly environmental problems associated with plastics, as the toxic emissions are created from the manufacturing process.

c) Plastic polymers never fully biodegrade, and ultimately break down into toxic dust which recycles into our food chain.

d) Plastics are made of petroleum, a valuable non-renewable resource.

Tips for Reducing Your Toxic Plastic Exposure:

1) Store your food and water in glass or stainless steel if at all possible.

2) If you can't use glass, only use one of the above "safe" plastic jars. **Safer plastics for storing food & beverages = #2 HDPE, #4 LDPE, and #5 PP**. Most research has not shown leaching of any carcinogens or endocrine disruptors from these plastics.

3) If you use a #1 PETE container (which is a commonly recycled type), remember they are not usually designed for re-use. Extended use will increase risk of leaching. Also their design lends itself to harboring of bacterial growth.

4) **Avoid Risky Plastics--#3 PVC, #6 PS, and #7 Other (usually Polycarbonate)**. Found in some clear food packaging, #3 PVC, the second most commonly used plastic in the world, is a toxic plastic dangerous both to our health and to the environment. NEVER use Styrofoam cups, especially for hot drinks. Polystyrene, #6 PS, is usually found in foam containers and cups may leach styrene. Styrene, considered a possible human carcinogen, may also disrupt hormones or affect reproduction. If you use baby bottles, know that around 95% of all baby bottles are currently made of polycarbonate (#7). Switch to polycarbonate-free baby bottles, like those manufactured from glass or from #5 PP, or consider using glass bottles whenever practical. And don't microwave your baby's plastic bottles!

5) Avoid heating food in plastic containers

6) Avoid storing fatty foods, such as meat and cheese, in plastic containers or plastic wrap

7) Bring your own containers and cups to shops where you'll be served in plastic

8) Avoid plastic cutlery and dinnerware, especially when cooking or heating food

9) Use wood instead of plastic cutting boards and spray your wooden board with a mist of vinegar, then with a mix of hydrogen peroxide, to kill bacteria

10) When purchasing cling-wrapped food from the supermarket or deli, slice off a thin layer where the food came into contact with the plastic and store the rest in a glass or ceramic container, or non-PVC cling wrap.

11) Get a good quality, non-plastic, reusable water bottle (eg: such as a SIGG bottle. These are aluminum with an inert water based internal lining). Don't freeze your plastic bottles with water in them as this releases dioxins from the plastic.