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## A Briefing for Consumers on Bisphenol A (BPA)

Most people in the industrialised world are exposed to BPA, a known hormone disrupting chemical (gender bender). It is used in the manufacture of clear polycarbonate plastic; for babies' feeding bottles and to manufacture other plastics, including the lining inside food and drink cans.

BPA is also used in many other consumer products including the bottles in water dispensers, plastic tableware, CDs, toys, laptops, mobile phones, lenses for glasses, electrical equipment, medical devices, thermal paper, applications in the automotive industry, and in the construction industry eg plastic sheeting for glazing.

Unfortunately, BPA may leach into food from polycarbonate plastic packaging and from food and drink cans. Exposure may also arise from BPA-related materials used in dental sealants and from handling thermal paper, which is used for lottery tickets and some till receipts. House dust may also be an exposure source. Babies and toddlers can be particularly exposed to BPA from the use of polycarbonate feeding bottles and toddlers' sippy cups, as well as from eating tinned baby foods.

BPA is able to de-rail the chemical messenger system in the body by mimicking or disrupting oestrogen and other hormones. In fact, BPA was first found to be able mimic oestrogen, the female hormone, back in the 1930s, and initially the pharmaceutical industry investigated whether it could be used as a drug. However, other synthetic oestrogens were developed instead. Several years later, it was found it could be made into the clear hard plastic known as polycarbonate, and though it was known to be hormonally active, it was used to make an ever-growing number of consumer products.

The health effects linked with exposure to BPA include: breast cancer, prostate cancer, endometriosis, heart disease, obesity, diabetes, altered immune system and effects on reproduction, brain development and behaviour, including behaviour in children.

In November 2010, the European Commission announced that from June 2011, the sale of polycarbonate babies' bottles will be banned in the EU. However, it has not taken steps to reduce exposures more widely.

Scientists cannot agree on the potential long term harm that exposure to BPA may cause. Many independent scientists have reported finding worrying effects at very low doses of BPA when they do tests in the laboratory, but others, including those working for industry, have not found such effects.

There are two forms of BPA, an active form and an inactive form and controversy exists about the levels of active BPA to which the population is exposed. Some researchers say we can break down the dangerous active form and make it harmless, others say this is not the case and highlight that the active form has been measured in human tissues.

It is difficult to be sure of the risks that BPA may pose to human health. Therefore, in the case of babies' bottles, the European Commission has decided to take precautionary, or 'better safe than sorry', action to protect young children.

However, research tells us that it is the unborn child developing in the womb that is most vulnerable to hormone disrupting chemicals. Therefore, CHEM Trust is calling for tougher laws to protect pregnant women and people of child-bearing age from exposure to BPA (see CHEM Trust's Policy Paper on BPA at [http://www.chemtrust.org.uk/policy\\_publications.php](http://www.chemtrust.org.uk/policy_publications.php)).

However, while waiting for such action to take place, people may wish to take their own steps to reduce their exposure. This could include:

- Avoid microwaving food in plastic, which over time may leach BPA. Plastic containers are numbered for recycling, and those made using BPA carry a 7, although not everything with a 7 contains BPA.
- Use baby bottles that are BPA free, but if possible breast feed because breast milk is considered best for your baby.
- Eliminate the use of polycarbonate plastic for food and drink containers, particularly replacing old or scratched polycarbonate food containers and not using them to warm food.
- Eliminate consumption of canned food and drink as much as possible, and try to eat a variety of freshly produced organic food, including plenty of fruit and vegetables.
- Avoid putting till receipts or lottery tickets in the mouth, and wash hands after handling.
- Ask dentists to avoid products made with BPA-related chemicals.



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