BABY BOTTLES and BISPHENOL A

Conventional plastic baby bottles are made from a plastic polycarbonate which can contain the chemical Bisphenol A.

What is Bisphenol A?

Bisphenol A is an industrial chemical known as 2,2-bis(4-hydroxyphenyl)- propane and is used as the starting material for the production of polycarbonate plastics.

Where is Bisphenol A found?

Several recent studies have described the leaching of bisphenol A from the polycarbonate baby bottles[i,ii] into the foodstuff it contains. Bisphenol A can be found in items made of plastic including baby bottles, drinking beakers, plastic tableware and is also used in the internal coating on tins of food.

Health effects of Bisphenol A

Bisphenol A is an "endocrine disrupter". An endocrine disrupter is an exogenous (from outside the body) substance or mixture that alters function(s) of the endocrine system and consequently causes adverse health effects in an organism, or its progeny.

According to the EU Endocrine website[iii] a number of human observations of adverse effects have been made in which endocrine disrupters could play a role, including:

- Declining sperm count
- Congenital malformations in children [iv]
- Cancer [v]
- **Retarded sexual development** [vi]
- **Retarded Neurobehavioral development** [vii]

Many present laboratory animal studies suggest that bisphenol A exposure at very low doses is linked to a staggering number of health problems, including prostate and breast cancer, obesity, hyperactivity, diabetes, altered immune system, lowered sperm count and sperm defects, increase in aggression, elimination of sex differences in behavior, impaired learning and memory, and early puberty.

Avoid

Baby bottles made from clear, hard polycarbonate plastic or which maybe labeled #7 or PC on the underside or bottles made from PVC labeled #3. Return scratched or polycarbonate bottles to the manufacturer or retailer stating why you do not want to continue using them.

Available alternatives

- **Glass baby bottles**: Choose bottles made from glass available from www.evenflo.com and www.angelbaby.co.uk
- Choose **baby bottles and spill-proof cups made of glass or polyethylene** (#1,#2,#4 recycling symbols), or polypropylene (#5).
(Source http://www.ewg.org/reports/bisphenola/consumertips.php)

References:

[i] R.L. Gibson (2007): Toxic baby Bottles - Scientific study finds leaching chemicals in clear plastic baby bottles, Environment California, available at: http://www.environmentcalifornia.org/reports/environmental-health/environmental-health-reports/toxic-baby-bottles

[ii] A WWF European Toxics Programme Report (April 2004):A Bisphenol A - A Known Endocrine Dirsrupter, available at: http://www.wwf.org.uk/filelibrary/pdf/bpa.pdf

[iii] http://ec.europa.eu/environment/endocrine/definitions/affect_en.htm

[iv] Susiarjo, M, TJ Hassold, E Freeman and PA Hunt. 2007. Bisphenol A Exposure *In Utero* Disrupts Early Oogenesis in the Mouse. (from www.ourstolenfuture.com)

[v] Increased incidences of hormone-related cancers of both women (breast & ovary) and males (testes & prostate) have been observed in the West and in countries adopting Western lifestyles. - Murray, TJ, MV. Maffini, AA Ucci, C Sonnenschein and AM. Soto. 2006. Induction of mammary gland ductal hyperplasias and carcinoma in situ following fetal bisphenol A exposure. Reproductive Toxicology, in press. (from www.ourstolenfuture.com). Durando, M, L Kass, J Piva, C Sonnenschein, AM Soto, EH Luque, and M Muñoz-de-Toro. 2006. Prenatal Bisphenol A Exposure Induces Preneoplastic Lesions in the Mammary Gland in Wistar Rats. Environmental Health Perspectives, in press

[vi] Kubo, K, O Arai, M Omura, R Wantanabe, R Ogata, and S Aou. 2003. Low dose effects of bisphenol A on sexual differentiation of the brain and behavior in rats. Neuroscience Research 45: 345-356.

[vii] Palanza, P, KL Howdeshell, S Parmigiani and FS vom Saal. 2002. Exposure to a low dose of bisphenol A during fetal life or in adulthood alters maternal behavior in mice. Environmental Health Perspectives 110 (suppl 3): 415-422.