PlasticsEurope
Association of Plastics Manufacturers

*Polycarbonate / Bisphenol A group*

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*Information regarding Li et al study*

## Findings from study on occupational exposure to BPA of limited relevance to consumers

**This study of occupational exposure to bisphenol A (BPA) among male factory workers in China provides interesting new information, although its relevance to average consumers who use products containing minute amounts of BPA is limited, at best. Based on the significant differences between occupational exposure and consumer exposure, the study authors state, 'the findings from this study probably do not apply to populations that are exposed to low levels of BPA.' In contrast, a recent EPA study, published in *Toxicological Sciences*, found that exposure to low levels of BPA had no effect on a range of reproductive and behavioural activities measured. This new EPA study, relevant to consumers, supports the conclusions of regulatory bodies worldwide that have recently completed scientific evaluations and found BPA safe, including for use in food-contact materials.**

In the study* the authors examined workers potentially exposed to BPA compared to a non-exposed control group. Parameters evaluated were air and urine levels as well as the results of self-reported interviews concerning male sexual functions. With respect to the Chinese workers' exposure, the study authors note that the 'observed association may only apply to highly exposed workers.' Importantly, it was unclear whether the workers in the study uniformly followed accepted worker-protection measures and procedures designed to prevent high-level exposure. As noted in the 2008 European Union risk assessment of BPA, when established worker-protection measures are taken, no further risk reduction measures are needed to prevent both 'repeated dose systemic effects and reproductive toxicity for workers.'

In an opinion published online in Human Reproduction** Prof. Richard M. Sharpe, Medical Research Council Human Reproductive Sciences Unit, UK, commented comprehensively on various technical parameters in the Li et al study, as well as on the relevance of its findings re BPA: *"its anti-androgenic potency is so weak that its actions via AR* (androgen receptor) *cannot provide a logical mechanistic explanation for the findings of Li et al. (2009), just as with its potential estrogenic effects. So there is a fundamental lack of plausibility in the idea that bisphenol A can cause effects in vivo at environmentally relevant levels via any mechanism that is classically AR or ER mediated."* He also points to the difference between workers and the normal population: *"Virtually all men are exposed to varying levels of bisphenol A, but in >95% their levels of exposure remain at least 10-fold lower (Calafat et al., 2008) than the average levels of exposure shown to occur occupationally in the study by Li et al. (2009)*. Sufficient information about the standards of personal protection and compliance with work place safety regulations in the investigated cohort is not available.

"It is essential that employees wear the personal protective equipment appropriate to their environment, and follow all established safety procedures. This commitment to worker safety is a core component of the Chemical Industry´s Responsible Care® program," stresses Jasmin Bird, Polycarbonate/Bisphenol A group of PlasticsEurope. PlasticsEurope member companies participate in this program, which incorporates key environmental, health, safety, and security policies, to achieve safety excellence and prevention of worker injury. PlasticsEurope´s member companies that produce BPA remain committed to openly and transparently sharing with the government and the public relevant environmental, health, and safety data.

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Abstract Li et al study, published on line in Human Reproduction:
*"Occupational Exposure to Bisphenol-A (BPA) and the Risk of Self-Reported Male Sexual Dysfunction," by D. Li, Z. Zhou, D. Qing, et al., Human Reproduction, doi:10.1093/humrep/dep381*
http://humrep.oxfordjournals.org/cgi/content/abstract/dep381v1?maxtoshow=&HITS=10&hits=10&RESULTFORMAT=&fulltext=occupational+epxosure+to+bisphenol+a&searchid=1&FIRSTINDEX=0&resourcetype=HWCIT

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Opinion of Prof. Sharpe, published online 10.10.2009 in Human Reproduction
http://humrep.oxfordjournals.org/cgi/content/extract/dep385

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