



What do POPs require of Children and Environmental Health (CEH) strategy?

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What do POPs require of Children and Environmental Health (CEH) strategy?

Author(s): Wallis M

Abstract

The European Ministers' CEH declaration in Budapest 2004 recognised children as specially vulnerable and not 'little adults' [1]. It expressed concern over potential toxicity of many chemicals, including carcinogenic, neurotoxic, immunotoxic, genotoxic, endocrine-disrupting and allergenic effects, but particularly of POPs. The declaration and CEHAPE programme [1-2] were based on WHO studies showing that children are a vulnerable group with special susceptibilities and unique exposures to environmental factors. WHO stressed important implications for public health practices and risk assessment approaches and developed guidance on scientific principles and approaches to assessing risks to children [3-4]. The UK's CEH Strategy [5] considers POPs only from breast milk ie. fat-soluble dioxins and PCBs; the TDI cannot be presumed to be protective as it does not include brominated dioxins, nor allow for dioxin-like chemicals other than PCBs. While the CEH Strategy refers to 'strict controls', general practice of controlling single chemicals [6] ignores additive and synergistic effects [7-9]. Fetal chord blood and the meconium are increasingly used outside the UK for sampling for POPs (necessary if non-fat soluble) and show that BDEs are increasing [10-11]. Perfluorinated POPs may also be increasing as huge quantities were disposed of in Buncefield fire foams prior to their phase-out.

Until the results of systematic studies are available, policy has to rely on small case studies, such as the WWF-UK 2004 monitoring of seven families (14 children) and the California study of a single family of four. The former found PBDEs, phthalates and PFOS/PFOA as well as Stockholm POPs, while the latter showed very different burdens of PBDEs, highest in the toddler, then a 5-yr old, then mother and last the father. Both show cause for concern sufficient to consider action as well as increased research. The toxicity of dioxin-unlike PCBs and PBDEs is largely unknown, but both affect similar enzymes to phenobarbital, whose long history for treating epilepsy and long-known harm to foetal and child development constitute strong grounds for concern, in advance as direct data.

A CEH strategy needs to include giving dietary advice to mothers that contains measures towards protecting the foetus pre-birth. In general, a CEH strategy needs stronger application of the precautionary principle. Most potential POPs have hardly been tested nor will be for years; moreover testing has limitations – no testing is possible on the human foetus and child. The precautionary principle becomes most important with the deficit of scientific information [14]. Protection of the child and its vulnerability require strong bias towards precaution.

Discussion

Points covered in attached slides

1. Euro-Policy driving for Children
2. UK's CEH 'Strategy'
3. Children's Exposure to Polybrominated Diphenyl Ethers
4. Body Burden: The Pollution in Newborns
5. Exposure to multiple environmental agents
6. Children are not "little adults"
7. Children's environmental health indicators
8. Con-Mals; need to apply Precautionary Principle

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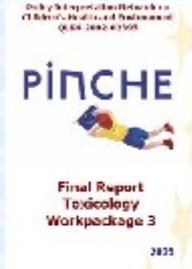
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Illustration 3

Children's Exposure to Polybrominated Diphenyl Ethers

Children's Exposure to Polybrominated Diphenyl Ethers
Author: Armin H. Kopp et al. / Source: Pediatrics and Environmental Health Perspectives



PINCHE
Final Report Toxicology Workpackage 3
 2012

Objectives: The PINCHE aimed to provide an overview of the current state of knowledge on the health effects of PBDEs since 2007. However, the main objective was to identify the most important research needs in the field of toxicological and clinical human research on PBDEs. The European Commission funded PINCHE and also coordinated the workshop.

Translation: This review studies and topics studies on PBDEs and other POPs in children.

Acta Paediatrica 2009; 89 Suppl: 450-451
 Evidence of both neurotoxic and developmental effects of polybrominated diphenyl ethers (PBDEs) is accumulating. This review discusses the effects of PBDEs on human health. Human levels in the environment and human health effects are discussed. Human exposure to PBDEs is discussed through diet, inhalation through dust, and milk.

With all this exposure to children, it is not surprising that the PINCHE project has produced a list of health effects of PBDEs, including neurotoxicity, developmental effects, and immunotoxicity. The PINCHE project has also produced a list of research needs in the field of toxicological and clinical human research on PBDEs. The PINCHE project has also produced a list of research needs in the field of toxicological and clinical human research on PBDEs. The PINCHE project has also produced a list of research needs in the field of toxicological and clinical human research on PBDEs.

Body Burden The Pollution in Newborns

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Illustration 4

● Exposure to multiple environmental agents

Exposure to multiple environmental agents and their effect
Author: Armin H. Kopp et al.



ACTA PEDIATRICA
Official Journal of the European Society of Paediatricians

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