

ECPCP Statement on endocrine disrupting chemicals

ECPCP Vaccination and Prevention Working Group

Why we are concerned

There is an increasing awareness of environmental threats to human and child health. It has been estimated that globally about 25% of human disease and disorders are attributable to environmental factors. Children are among the most vulnerable and thus we strongly believe that our role as paediatricians is to increase awareness and alert to environmental risks.

Endocrine disrupting chemicals (EDCs) interact with the endocrine system which is a complex messaging system regulating key vital functions and behaviours throughout life. We cannot assume that there is a safe exposure threshold and mixtures are particularly worrisome. Fetal development, early childhood and puberty are critical periods of exposure and events early in life set the stage for how the body responds to the environment throughout life and through epigenetic changes may even affect multiple generations. This concept of windows of vulnerability is often referred to as the « Developmental origins of health and disease » (DOHAD). Testing for EDCs now shows the presence of a variety of problematic chemicals in all individuals worldwide. More alarmingly these substances may be persistent and bio-accumulative.

Endocrine disrupting chemicals (EDCs) are increasing our risk of developing serious and potentially lethal diseases and health disorders as highlighted by experts from the World Health Organization (WHO), scientists from the Endocrine Society, and others. EDCs have been linked to reproductive and fertility problems as well as hormone dependent cancers, to neurodevelopmental problems via thyroid disturbance and metabolic changes including obesity and diabetes. The incidence of endocrine-associated paediatric disorders, including male reproductive problems (cryptorchidism, hypospadias, testicular cancer), premature thelarche, early female puberty, leukaemia, brain cancer, and neurobehavioral disorders such as ADHD, autism have all risen rapidly over the past decades.

What we can do about it :

- Raise awareness about developmental and reproductive consequences of exposure to endocrine disrupting chemicals.
- Demand that environmental risks and particularly EDCs be part of the training of future paediatricians and continuous medical education
- Make information available for the general public, speak to decision makers and NGOs
- Specifically target pregnant women and parents of young children but also school-kids, adolescents and early childhood professionals
- Inform about common sources of exposure and counsel families on prevention strategies to minimise exposures
- Promote environmental risk assessment for exposure through questionnaires.
- Demand regulations concerning exposure to endocrine disrupting chemicals in maternity wards, nurseries, hospitals, kindergartens and schools
- Demand better training of key professional branches (agricultural workers, veterinary, chemical industrie workers, early childhood professionals)
- Increase safety of food for children, pregnant and breastfeeding women by analysing products for EDCs and adequate labelling
- Use of early childhood equipment committed to limiting environmental toxicity in children hospitals, nurseries, kindergartens, playgrounds and schools.
- Inform on the necessity of frequent ventilation of indoor living areas to improve air quality and encourage measures and monitoring of air quality.
- Ask for analysing EDCs in water and monitor estrogenic activity of drinking water
- Demand better regulation of recycling to avoid contamination by dangerous substances and increase regulations for replacement substances
- Enhance research efforts on effects and consequences of exposure to EDCs on humans and environment

WHO, UNEP State of the Science of Endocrine Disrupting Chemicals 2012 Summary for Decision-Makers
Edited by Åke Bergman Jerrold J. Heindel et al
http://apps.who.int/iris/bitstream/handle/10665/78102/WHO_HSE_PHE_IHE_2013.1_eng.pdf?sequence=1

Endocrine Society: <https://www.endocrine.org/topics/edc>

UN List of Identified Endocrine Disrupting Chemicals 2018: https://www.chemsafetypro.com/Topics/Restriction/UN_list_identified_endocrine_disrupting_chemicals_EDCs.html

Endocrine disrupting Chemicals and Human Growth and Maturation: A Focus on Early Critical Windows of Exposure, Vitamines and Hormones(2014), vol.94