

Phthalates Exposure in Childhood: Is there Evidence of Harm?



Foto: Thomas Heitikkaan

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Phthalates



Phthalates

- Concerns exist about the potential for phthalates to act as endocrine disruptors, largely based on animal studies and a small but growing body of evidence in human studies.

Hormonal effects of phthalates

	Animal Studies	Human Studies
DEHP	↑gestational age	
DBP	↓ gestational age	✓
BBP	↑body weight at lactation	
DBP, DEHP	↓ serum testosterone	✓
BBP	↓ Anogenital distance in male infants	✓
MBP	Decreases testicular function	✓

Phthalates Legislation

- Several countries around the world, beginning with the European Union, have subsequently banned phthalates in children's products.

Phthalates in the Media

- Widespread media reports on the potential harms of **toxic toys** and other children's products containing phthalates have raised parental anxiety about the impact of environmental exposures on their children.

Primary care pediatricians

- Faced with clinical questions that are difficult to answer:
 - limited medical school training in children's environmental health
 - Especially limited knowledge of emerging exposures of concern such as phthalates
 - Conflicting messages in the media

What Parents Ask

- Where are phthalates found?
- Is this pacifier harmful to my child?
- How do I know if toys contain phthalates?
- Why was it banned?
- What health effects should I look for?
- Should I avoid phthalates if I am pregnant?
- What substitutes can I use for my child?

Goals for this Session

To describe:

- exposure levels in pregnant women, toddlers, and school aged children
- sources of exposure
- known and potential health outcomes

Is there Evidence of Harm?

Pregnant women in New York City

Dr. Robin Whyatt
Columbia University Center for Children's Environmental Health

6-24 month old infants from California, Minnesota, and Missouri

Dr. Sheela Sathyanarayana
University of Washington, Seattle, Northwest PEHSU

Pregnant women and 4-8 year old children in New York City

Dr. Mary Wolff
Mount Sinai Center for Children's Environmental Health



Phthalates Exposures are Widespread

	MEP	MBuPhth	MbZPhth	MECPP
NYC Pregnant Women (n=246)	232	37.5	17.5	-
NYC Pregnant women (n=382)	380	36	22	35
CA, MI, MO 2-24 mos (n=163)	65	19	15	4
NYC 6-8 yo girls (n=30)	100	50	22	111
NYC 6-8 yo boys (n=101)	152	68	48	123
NYC kids (n=35) 159 samples	166	56	38	139

Summary of Findings

- Sources are varied
 - Products used
 - Indoor air
- Good biomarkers
- Health outcomes
 - Gestational Age
 - Anogenital Distance
 - BMI
 - Asthma

What's the evidence for Phthalates in Cosmetics?

- EWG report on phthalates in cosmetics
- Skin Deep Database
- Safe Cosmetics Fact Sheet
- 12 Ugly Truths Behind the Myth of Cosmetic Safety
- Campaign for Safe Cosmetics



Pocket Guide to Plastics for easy reference

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Key areas for discussion include:

- What is the current evidence for adverse health outcomes?
- What are the research gaps?
- What health messages on phthalates can we share with families now?
- What policy issues remain unresolved?

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