

Project TENDR

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Past President

American Congress of Obstetricians and Gynecologists

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About ACOG

The American Congress of Obstetricians and Gynecologists (ACOG) is the nation's leading group of physicians providing health care for women. With more than 57,000 members, ACOG strongly advocates for quality health care for women, maintains the highest standards of clinical practice and continuing education of its members, promotes patient education, and increases awareness among its members and the public of the changing issues facing women's health care.

Why Ob-Gyns?

Ob-gyns are primary care providers

- Ob-gyns provide more preventive services for women than any other provider type
- Only physician seen regularly by many women during their reproductive years
- **Uniquely poised to intervene during preconception & pregnancy – critical windows of human development**



Reproductive Health and the Environment

What is “The Environment”?



“ENVIRONMENT” Includes:

- Industrial chemicals
- Agricultural chemicals
- Physical agents (heat, radiation)
- By-products of combustion and industrial processes (dioxin)
- Foods and nutrients
- Prescription drugs
- Lifestyle choices and substance abuse
- Social and economic factors



U.S.

High Lead Levels In Michigan Kids After City Switches Water Source

Updated October 5, 2015 - 6:19 AM ET

Michigan AG: Flint water not even safe to 'bathe a newborn'



Source: Dr. Mona Hanna-Attisha, Hurley Medical Center

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Congressional Office Building's Water Is Contaminated With Lead



The Cannon House Office Building

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Why Do We Not Address Environmental Issues?

Medical Providers do not discuss Environmental Impacts on Health because

- A. The research is lacking
- B. We are not comfortable with the topic
- C. There are no data to support the topic historically
- D. We have more important topics to discuss
- E. We follow the ostrich approach: we hide our heads unless we can give a full and complete answer, OR solve a problem
- F. We really are unaware that there is a problem
- G. We DO! We just have not appreciated it (Blood sugar or hypertension)

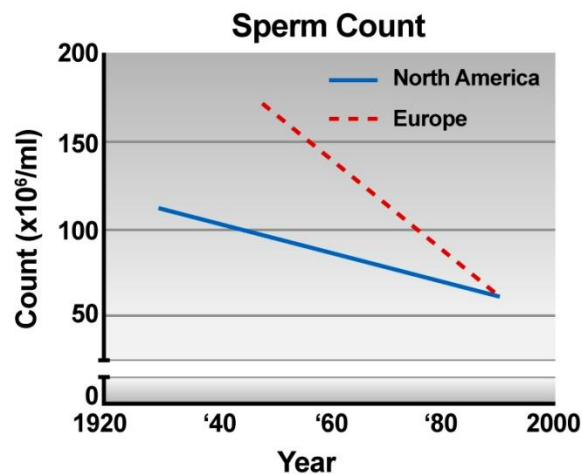
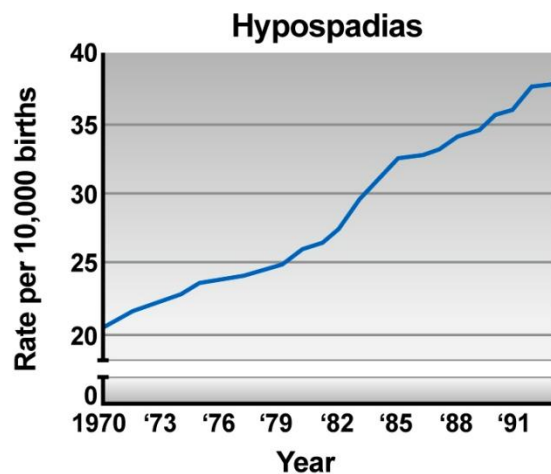
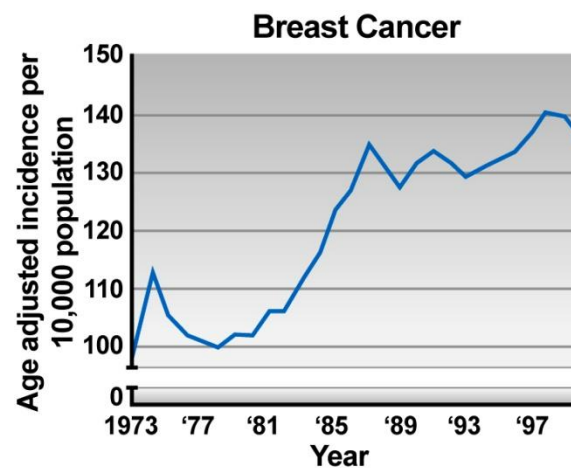
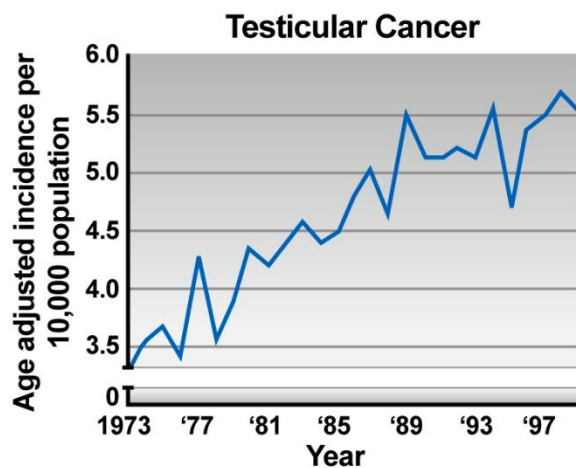
How do we get the attention of all clinicians?



We need to *translate* the science



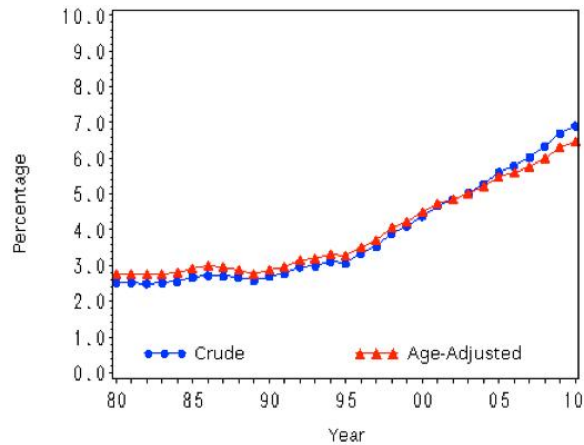
Should We Be Concerned?



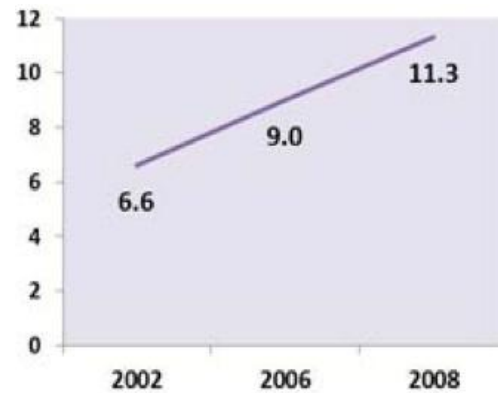
Dr. Birnbaum: NIEHS, Sharpe and Irvine, 2004

Should We Be Concerned?

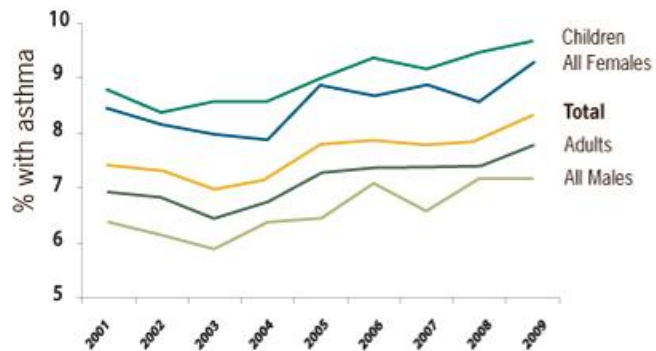
Increase in Diabetes (1980-2010)



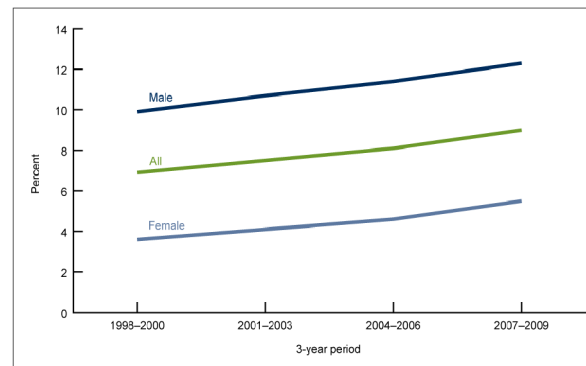
Increase in Autism Prevalence



Increase in Asthma



Increase in ADHD



Dr. Birnbaum: NIEHS, Data from CDC / National Center for Health Statistics

Chemicals in the US environment



- In the United States alone, 84,000 chemicals are listed by the Environmental Protection Agency
- 700 new chemicals released annually
- 3000 chemicals are “high volume” or exceed 1million pounds of use a year
- The vast majority have not had research or been subjected to standard studies

U.S. Environmental Protection Agency. *TSCA Chemical Substance Inventory*. 2012 Available from: <http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/basic.html>.

Vogel, S.A. and J.A. Roberts, *Why The Toxic Substances Control Act Needs An Overhaul, And How To Strengthen Oversight Of Chemicals In The Interim*. Health affairs, 2011. **30**(5): p. 898-905.

ACOG/ASRM Committee Opinion

Environmental chemicals can cross the placenta



ACOG/ASRM Committee Opinion

- Exposure to harmful environmental chemicals is ubiquitous
- Everyone, everywhere, everyday

**43 Chemicals Found in
Virtually Every Pregnant
Woman in the US**

Woodruff T.J., Zota A.R., and Schwartz J.M. Environmental chemicals in pregnant women in the U.S.: NHANES 2003-2004. Environmental Health Perspectives 2011



ACOG/ASRM Committee Opinion

All exposures are not created equal

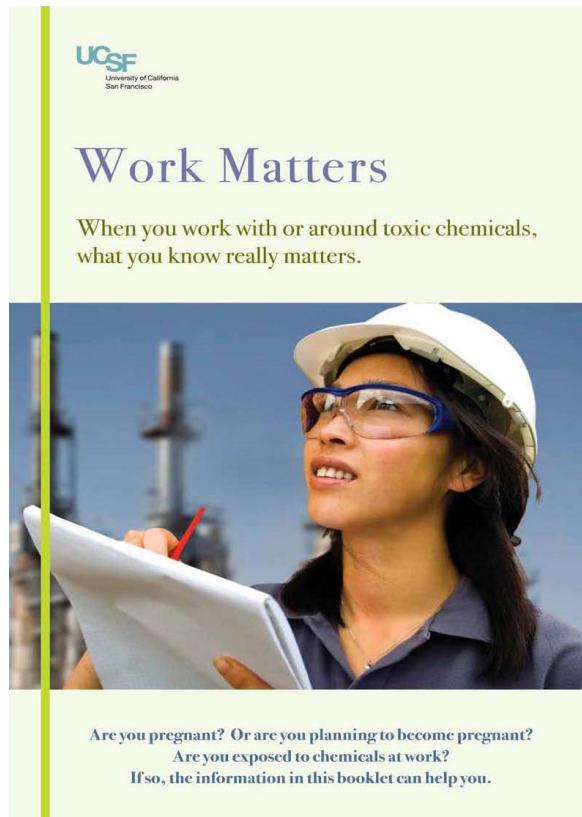
Underserved and minority populations disproportionately impacted

More likely to be exposed to higher levels of outdoor and indoor pollutants



ACOG/ASRM Committee Opinion

All exposures are not created equal



Women of reproductive age with occupational exposure to toxic chemicals are highly vulnerable to adverse reproductive health outcomes

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The “Alphabet Soup” of Synthetic Chemicals

- LEAD
- MERCURY
- Pesticides (DDT)
- Polychlorinated Biphenyls (PCB)
- Polybrominated Biphenyls (PBB)
- Dioxin
- BPA
- PFOA
- Phthalate
- Pharmaceutical (DES)
- Soy¹⁸ (baby formula)



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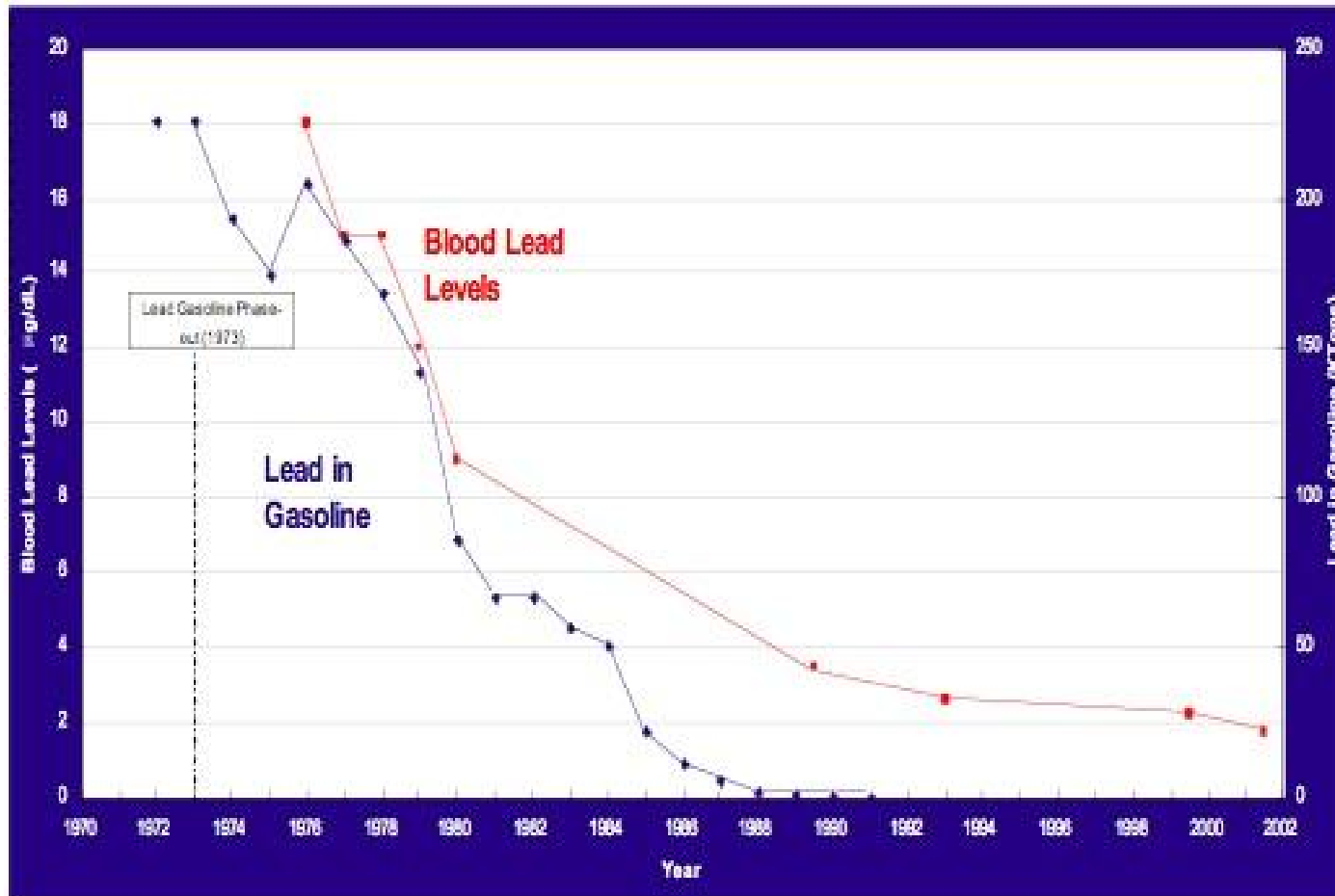
Endocrine Disruptors

Endocrine disruptors are chemicals that may interfere with the body's endocrine system and produce adverse developmental, reproductive, neurological, and immune effects in both humans and wildlife

NIEHS. <http://www.niehs.nih.gov/health/topics/agents/endocrine/>

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Many Toxic Exposures Cannot Be Controlled by Individual Action



Individual Action Alone is Not Enough

MEET MOLLY GRAY.

Eats organic. Avoids BPA. Buys natural cleaners.
Loaded with toxic chemicals.



- Nine pregnant women tested from Washington, Oregon, and California, during the second trimester had detectable:
 - Bisphenol A
 - Mercury
 - At least four phthalates
 - At least two and up to 4 perfluorinated chemicals

Ob-Gyns & Prevention



Food Matters: What to Eat?

Your health depends on the food you eat.

The health of communities and the environment we depend on for life are also impacted by how food is grown and how it gets to your dinner plate.

This brochure provides tips for making food choices to protect your health and the health of your family and community.

The brochure also provides many more resources to learn more about how the food we eat impacts our health. For more information, visit: <http://www.prhe.ucsf.edu/prhe/foodmatters.html>

There are many ways to make a difference. Here are some suggestions to get started.

Ob-gyns don't need to be experts in environmental health to provide useful information to patients.

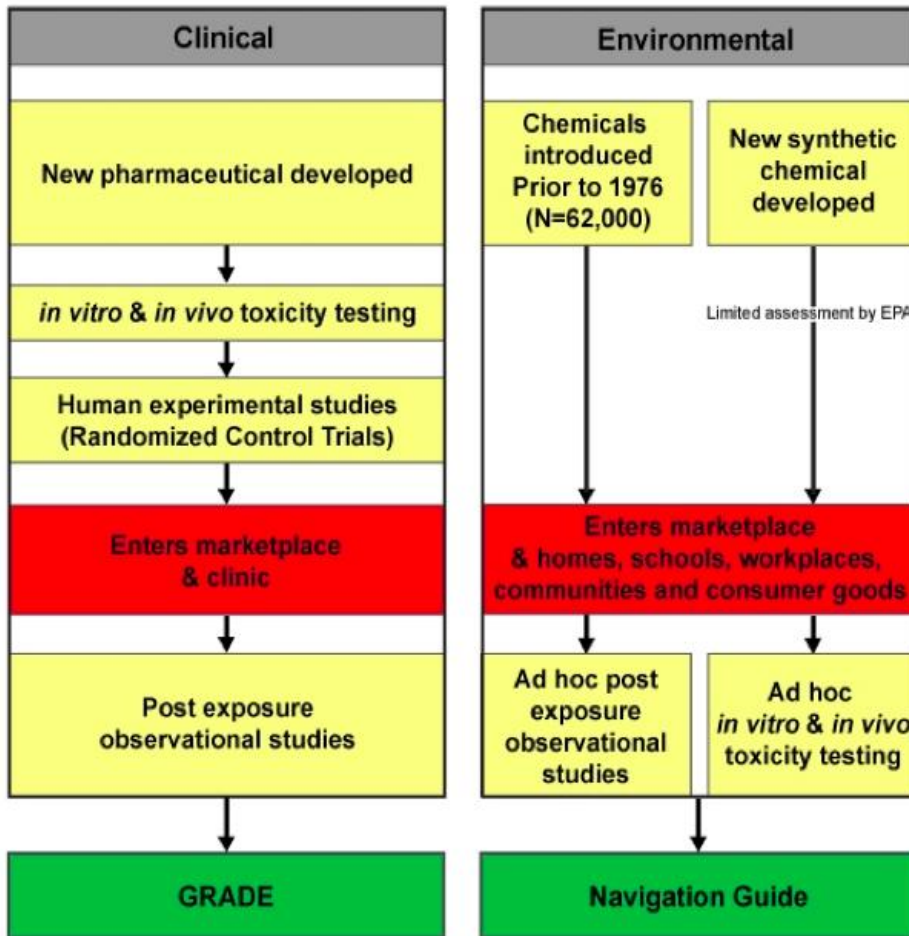
However, they should:

- Be familiar with their geographic area
- Take an exposure history early
- Provide information about how the food system affects health
- Communicate the science and areas of uncertainties about environmental exposures

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Navigating the Science

Figure 1. Streams of Evidence for Chemical Toxicity Assessment in Clinical and Environmental Health Sciences



Pharmaceuticals must show efficacy and safety *prior to exposing humans*

Manufactured chemicals need to show evidence of harm *prior to removing human exposure*

Woodruff TJ, Sutton P and the Navigation Guide Work Group. An Evidence-Based Medicine Methodology To Bridge The Gap Between Clinical And Environmental Health Sciences *Health Affairs*, 30, no.5 (2011):931-937

Policy Gaps

Forum: Science & Society

Cell
PRESS

When environmental chemicals act like uncontrolled medicine

Linda S. Birnbaum

National Institute of Environmental Health Sciences and National Toxicology Program, Research Triangle Park, NC 27709, USA

In the same way as medicines are delivered to produce effects in the endocrine system, environmental chemicals can be similarly delivered to produce unwanted endocrine effects, resulting in a staggering increase in several diseases. These effects on endocrine and other physiological systems can have significant population-level impacts and thus require public health approaches to disease control.

breast cancer risk, and women who were exposed to DDT before the age of 4 years exhibited the highest risk [7]. Elevated concentrations during adolescence of serum polybrominated diphenyl ethers (PBDE), a common flame retardant, are associated with a younger age of menarche, which in turn might contribute to increased risk of breast cancer [8].

Birnbaum LS. When environmental chemicals act like uncontrolled medicine. Trends Endocrinol Metab. 2013 Jul;24(7):321-3. doi: 10.1016/j.tem.2012.12.005. Epub 2013 May 7. PubMed PMID: 23660158.

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SINCE 2013

**OUR NATIONAL AND INTERNATIONAL ORGANIZATIONS
HAVE SET NEW STANDARDS**

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ACOG eModules

Articles & Resources

Clinical Review

Committee Opinions

Department Publications

Episiotomy

Green Journal

Guidelines for
Adolescent Health Care

Guidelines for Perinatal
Care

Guidelines for Women's
Health Care

The Ob-Gyn Workforce

Obstetric Care
Consensus Series

Patient Education FAQs



The American College of
Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS



COMMITTEE OPINION

Number 575, October 2013

**The American College of Obstetricians and Gynecologists Committee on Health Care for Underserved Women
American Society for Reproductive Medicine Practice Committee**

The University of California, San Francisco Program on Reproductive Health and the Environment

This Committee Opinion was developed by the American College of Obstetricians and Gynecologists Committee on Health Care for Underserved Women and the American Society for Reproductive Medicine Practice Committee with the assistance of the University of California, San Francisco (UCSF) Program on Reproductive Health and the Environment. The Program on Reproductive Health and the Environment endorses this document. This document reflects emerging clinical and scientific advances as of the date issued and is subject to change. This information should not be construed as dictating an exclusive course of treatment or procedure to be followed.

[PDF Format](#)

Exposure to Toxic Environmental Agents

ABSTRACT: Reducing exposure to toxic environmental agents is a critical area of intervention for obstetricians, gynecologists, and other reproductive health care professionals. Patient exposure to toxic environmental chemicals and other stressors is ubiquitous, and preconception and prenatal exposure to toxic environmental agents can have a profound and lasting effect on



Royal College of
Obstetricians and Gynaecologists

Bringing to life the best in women's health care

Scientific Impact Paper No. 37

May 2013

Chemical Exposures During Pregnancy: Dealing with Potential, but Unproven, Risks to Child Health



www.igo.org

Contents lists available at ScienceDirect

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journal homepage: www.elsevier.com/locate/ijgo



SPECIAL COMMUNICATION

International Federation of Gynecology and Obstetrics opinion on reproductive health impacts of exposure to toxic environmental chemicals☆

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ABSTRACT

Exposure to toxic environmental chemicals during pregnancy and breastfeeding is ubiquitous and is a threat to healthy human reproduction. There are tens of thousands of chemicals in global commerce, and even small exposures to toxic chemicals during pregnancy can trigger adverse health consequences. Exposure to toxic environmental chemicals and related health outcomes are inequitably distributed within and between countries; universally, the consequences of exposure are disproportionately borne by people with low incomes. Discrimination, other social factors, economic factors, and occupation impact risk of exposure and harm. Documented links between prenatal exposure to environmental chemicals and adverse health outcomes span the life course and include impacts on fertility and pregnancy, neurodevelopment, and cancer. The global health and economic burden related to toxic environmental chemicals is in excess of millions of deaths and billions of dollars every year. On the basis of accumulating robust evidence of exposures and adverse health impacts related to toxic environmental chemicals, the International Federation of Gynecology and Obstetrics (FIGO) joins other leading reproductive health professional societies in calling for timely action to prevent harm. FIGO recommends that reproductive and other health professionals advocate for policies to prevent exposure to toxic environmental chemicals, work to ensure a healthy food system for all, make environmental health part of health care, and champion environmental justice.

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NOW

- ✓ The nations scientists say it is time to act
- ✓ EVERY voice matters
- ✓ TSCA reform was the first step
- ✓ We must be led by unbiased research
- ✓ The burden of proof must SHIFT: right now the burden is on us to Prove **Harm**. The burden should fall on industry to Prove **Safety BEFORE a chemical is in use**.