

IPEN-Endocrine Society

Collaboration:

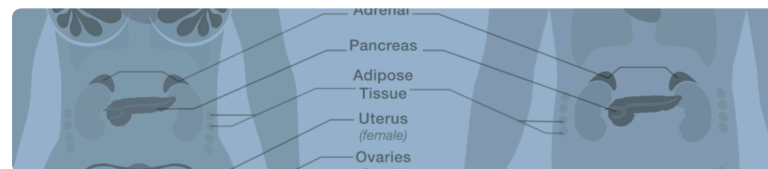
*An Initiative to Raise Global
Endocrine Disrupting Chemicals
Awareness*

CHE Alaska Webinar

April 8th 2015

Bjorn Beeler

IPEN International Coordinator



INTRODUCTION TO ENDOCRINE DISRUPTING CHEMICALS (EDCs)

**A GUIDE FOR PUBLIC INTEREST ORGANIZATIONS
AND POLICY-MAKERS**



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December 2014



ENDOCRINE
SOCIETY 
Hormone Science to Health

IPEN
a toxics-free future

EDC Guide online: www.endocrine.org/EDCGuide

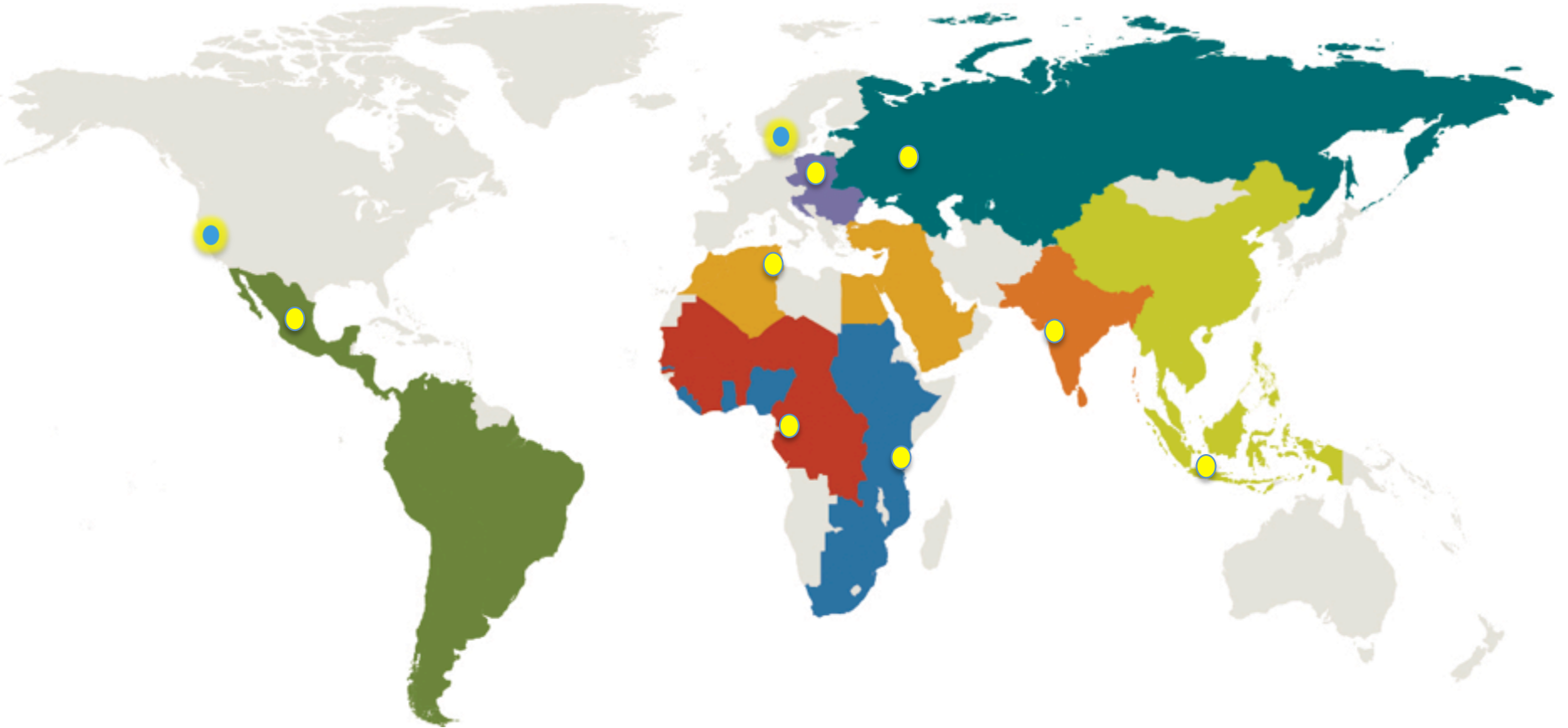
IPEN Overview: Mission

A TOXIC'S FREE FUTURE FOR EVERYONE

A world in which chemicals are no longer produced or used in ways that harm human health and the environment



IPEN Overview: Global Network



700+ IPEN Participating Organizations in 116 countries

8 Regional Hubs Offices

2 International Offices (Sweden & US)

IPEN Overview: Local Chemical Issues & Priorities



Pesticides
Waste
Contaminated Sites
(Industrial Pollution)



IPEN Leadership



Co-Chairs
Executive Committee
Steering Committee
Regional Hubs
Secretariat
Thematic Working Group Coordinators

Africa

Cameroon
Ethiopia
Tanzania

Arab

Lebanon
Tunisia

Asia-Pacific

Bangladesh
Cook Islands
India
Indonesia
Philippines

C/E Europe

Belarus
Russia

Latin America

Chile
Mexico

US

Alaska
California

W. Europe

Czech Rep.
France
Germany
Switzerland
Sweden

Global: Increased Chemical Production & Use



Global Chemical Sales: \$17 Billion USD (1970s) → \$4.1 Trillion (2010)

Rapid Expansion in Developing Countries: limited regulation & capacity
(ex: China's chemical production forecasted to grow by 66% within the 2012-2020 period)

IPEN's Theory of Change: Local-Global-Local

Globalize Local Priorities

Linking local priorities to global policies



Localize Global Policies

Leveraging global policies and resources for on-the-ground action and change

IPEN: Areas of work

Eliminating the World's Most Hazardous Chemicals: Making International Treaties Work



Promoting Stronger International Chemicals: A Strategic Approach to International Chemicals Management (SAICM)

Halting the Spread of Toxic Metals: Mercury Treaty and Lead Paint Elimination



Capacity Building & Expansion of Global Toxics-Free Movement

Global Policy: Local Voice to the Global Arena

Global Chemical Policy Arenas:

- Stockholm, Basel, Rotterdam & Minamata Conventions
- SAICM: Strategic Approach to International Chemicals Management



EDCs on the Global Chemical Policy Agenda

Global Community recognize EDCs as an Emerging Issues, via adoption of the 2012 SAICM Resolution on EDCs

“...potential adverse effects of endocrine disruptors on human health and the environment” and “...the need to protect humans, and ecosystems and their constituent parts that are especially vulnerable.”



LOCAL



GLOBAL



Adopted* by reps from:
122 Government
19 Int'l Organizations
79 NGOs

* Non-legally binding

EDCs in the Global Chemical Policy Arena

The SAICM actions recommended for the time period from 2012 – 2015 include the following:

- Provide up-to-date information and scientific expert advice to relevant stakeholders for the purpose of identifying or recommending potential measures that could contribute to reductions in exposures to or the effects of endocrine-disrupting chemicals, in particular among vulnerable populations;
- Raise awareness at all levels;
- Provide international support for activities to build capacities in countries, in particular developing countries and countries with economies in transition, for generating information and for assessing issues related to endocrine-disrupting chemicals in order to support decision-making, including the prioritization of actions to reduce risks; and
- The development of case studies and advice on translation of research results into control action

SAICM EDC Resolution: Framework for Action

Outreach to EDC Science Leaders: the Endocrine Society

Localize Global Policies

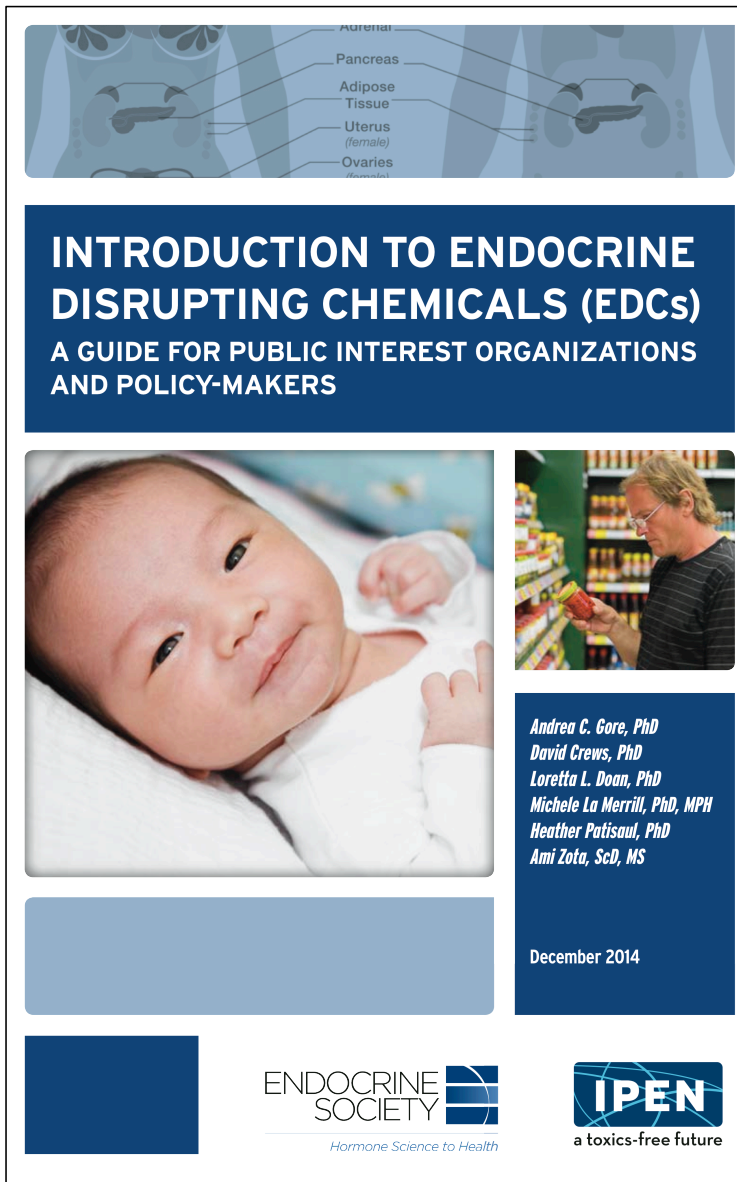
Leveraging global policies and resources for on-the-ground action and change (capacity/knowledge building)

LOCAL

GLOBAL



ES-IPEN Initiative: Global EDC Awareness

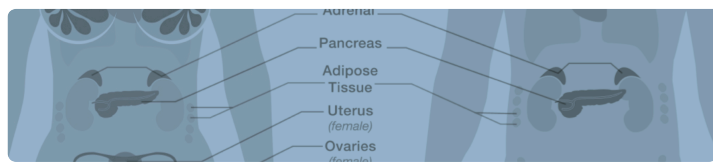


1) ES-IPEN EDC Initiative

2) ES-IPEN EDC Guide

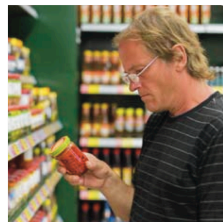
- **Target Audience:** NGOs & Policy Makers in Developing/Transitional Countries
- **Scope:** Science from ES
ES Scientific Statement
WHO-UNEP State of the Science Report
- **Roles/ ES & IPEN Teams**
 - > ES= Science & Health Authors
 - > IPEN= SAICM & Global South relevance
- **Joint Production/Release:**
Global distribution
(translations/webinars)

EDC Guide: Chapters



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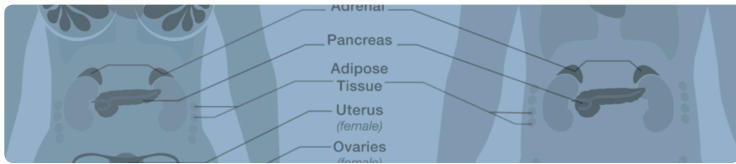


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- 1- Major Health Institutions
- 2- Endo System
- 3- Impacts of EDCs (diseases)
- 4- Need for New Paradigm
(low dose effects/the concept of no safe dose)
- 5- Exposure Examples

EDC Guide: Key Points



INTRODUCTION TO ENDOCRINE DISRUPTING CHEMICALS (EDCs)

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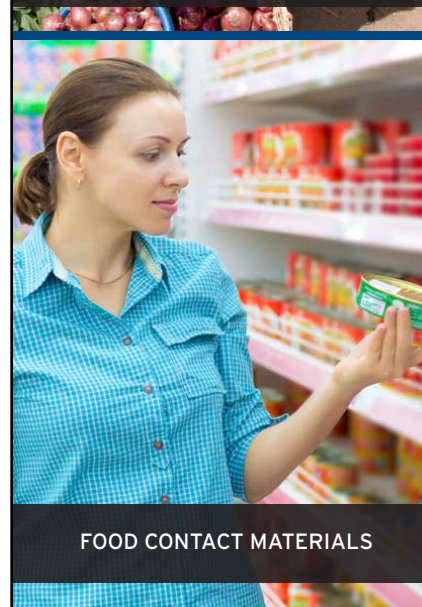
WHERE YOU CAN FIND EDCs



PESTICIDES



CHILDREN'S PRODUCTS



FOOD CONTACT MATERIALS



ELECTRONICS AND BUILDING MATERIALS

EDC Guide: Communication & Messaging



There is good reason to suspect that increasing chemical production and use is related to the growing incidence of endocrine-associated pediatric disorders over the past 20 years, including male reproductive problems (cryptorchidism, hypospadias, testicular cancer), early female puberty, leukemia, brain cancer, and neurobehavioral disorders.

EDC Guide: Communication & Messaging



The American Chemical Society issued a 2012-2015 policy statement on testing for endocrine disruption, recommending expanded education and research, updated testing protocols, and the development of safer alternatives to EDCs.

EDC Guide: Communication & Messaging

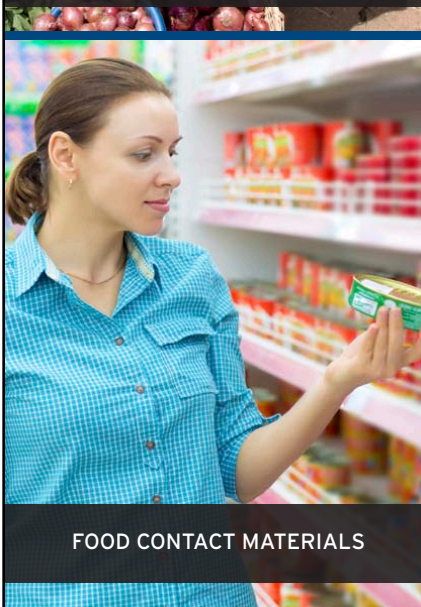
WHERE YOU CAN FIND EDCs



PESTICIDES



CHILDREN'S PRODUCTS



FOOD CONTACT MATERIALS



ELECTRONICS AND BUILDING MATERIALS

Category/Use	Example EDCs
Pesticides	DDT, chlorpyrifos, atrazine, 2,4-D, glyphosate
Children's products	Lead, phthalates, cadmium
Food contact materials	BPA, phthalates, phenol
Electronics and Building materials	Brominated flame retardants, PCBs
Personal care products, medical tubing	Phthalates
Antibacterials	Triclosan
Textiles, clothing	Perfluorochemicals

Abbreviations: BPA: bisphenol A; 2,4-D: 2,4-dichlorophenoxyacetic acid; DDT: dichlorodiphenyltrichloroethane; PCBs: polychlorinated biphenyls

EDC Guide: Communication & Messaging



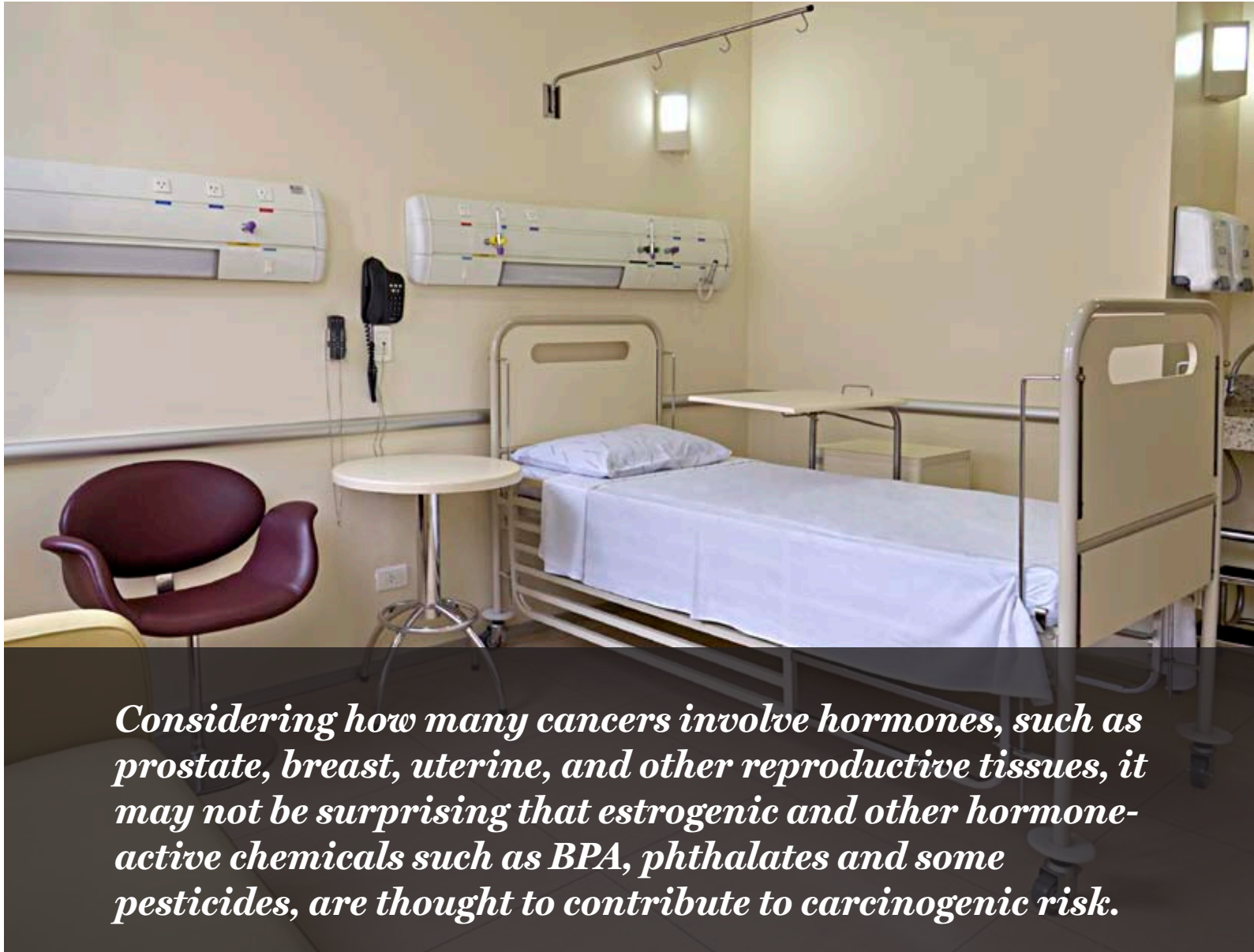
When humans are tested for the presence of EDCs in their blood, fat, urine, and other tissues, the results consistently demonstrate a variety of EDCs in all individuals worldwide.

EDC Guide: Communication & Messaging



Chemicals referred to as “obesogens” are thought to enhance weight gain by altering or reprogramming key parts of the endocrine system governing metabolism, energy balance, and appetite, resulting in obesity and its related adverse health outcomes.

EDC Guide: Communication & Messaging



Considering how many cancers involve hormones, such as prostate, breast, uterine, and other reproductive tissues, it may not be surprising that estrogenic and other hormone-active chemicals such as BPA, phthalates and some pesticides, are thought to contribute to carcinogenic risk.

EDC Guide: Communication & Messaging

Traditional Approach to Chemical Testing: 'The Dose is the Poison'

Why this approach is insufficient for Endocrine-Disrupting Chemicals

Tests individual chemicals one at a time

Every person in the world now carries a body burden of chemicals that did not exist before 1940. Many more are being produced and released into the environment each year. Testing chemicals one at a time can't keep pace with exposure and doesn't take into account how combinations of chemicals within the body are impacting human development or health.

Assumes individual chemicals have a "safe or acceptable" level of exposure below which there are no adverse effects

The endocrine system regulates virtually every aspect of human health from development in the womb, to growth, to reproduction, and overall health. Recent science shows that even very small amounts of these chemicals or mixtures of these chemicals disrupt the endocrine system, reducing intelligence, disrupting reproductive systems, and causing other health problems. There may, in fact, be no safe level, especially when individuals have hundreds of these chemicals in their bodies.

Tests are focused on adult animals

Hormones regulate body systems beginning in the womb and throughout life. Tests conducted only on adult animals can't capture the impact of chemicals on the endocrine system throughout the body's life cycle.

Presumes doses below the amounts which cause test animals to die or develop a target disease (usually cancer) are 'safe'

Endocrine-disrupting chemicals have many impacts beyond death or disease.

EDC Guide: Communication & Messaging



We now know that direct exposures of an individual to EDCs cause a range of behavioral, endocrine, and neurobiological problems. This requires a paradigm shift in how to conduct risk assessment.

EDC Guide: Communication & Messaging



Exposure to EDCs may also be in the form of pesticides, algicides, and other chemicals designed to kill unwanted organisms. Spraying of homes, agricultural crops, and ponds releases airborne and sedimented chemicals that are inhaled, get on skin, and are ingested from sprayed food. It is not surprising that some of these chemicals are EDCs.

EDC Guide: Communication & Messaging



There is some evidence that chlorpyrifos can accumulate up the food chain in certain species, and it has been measured in fish in the Arctic as a result of global transport.

EDC Guide: Next Step

Translation & Production:

In Review: Spanish & French

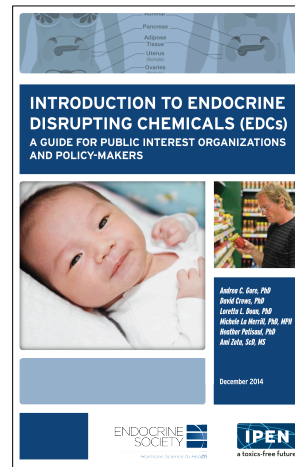
Potential: Arabic, Chinese, Portuguese and Russian

Webinars:

Regional Webinars for NGOs and country delegates

Global Monitoring:

Long-term (IPEN) Plan



Download the **EDC Guide** at:
www.endocrine.org/EDCguide

Thank you for your attention 😊



www.ipen.org | www.ipen-china.org | ipen@ipen.org | [@ToxicsFree](https://www.instagram.com/ToxicsFree)