



House Bill 27 Toxic Free Children's Act

Representative Geran Tarr

Regulation of Chemicals in Our Environment

- Federal Laws
 - Federal Insecticide, Fungicide, and Rodenticide Act (passed in 1910, pesticides)
 - Federal food, Drug, and Cosmetic Act (passed in 1938, drugs, cosmetics, foods, food additives)
 - Toxics Substances Control Act (passed in 1976)
 - Updated in 2016 with Frank Lautenberg Chemical Safety for the 21st Century Act

Regulation of Chemicals in Our Environment

- Federal Laws
 - Consumer Product Safety Improvement Act of 2008
 - Use children as the benchmark for safety
 - Included the Lead Free Toys Act
 - Status – *"CPSC has and is continuing to implement regulations based on CPSIA."*

Consumer Product Safety Commission, March 9, 2018

Frank R. Lautenberg Chemical Safety for the 21st Century Act

TSCA as reformed by the Frank R. Lautenberg Chemical Safety for the 21st Century Act

Mandatory duty on EPA to evaluate existing chemicals with clear and enforceable deadlines

Chemicals assessed against a risk-based safety standard

Unreasonable risks identified in the risk evaluation must be eliminated

Expanded authority to more quickly require development of chemical information when needed

TSCA pre-reform

No duty to review, no deadlines for action

Risk-benefit balancing standard

Significant risks might not be addressed due to cost/benefit balancing and no mandate to act

Testing on existing chemicals required lengthy rulemaking



THE POINT

MUCH REMAINS TO BE DONE

MUCH REMAINS TO BE LEARNED

Health Concerns Due to Exposure to Chemicals

- Cancer
- Reproductive Health disorders
- Developmental delays or cognitive impairment
- Birth defects
- Endocrine disruption
- Respiratory disorders
- Neurodevelopmental disorders

3 Ways for Exposure

- Absorption
 - Personal Care Products (directly to skin)
- Inhalation
 - Flame Retardants (in dust and burning)
- Eating
 - Pesticides on fruits and vegetables, in milk and meat

Flame Retardants (PBDEs)

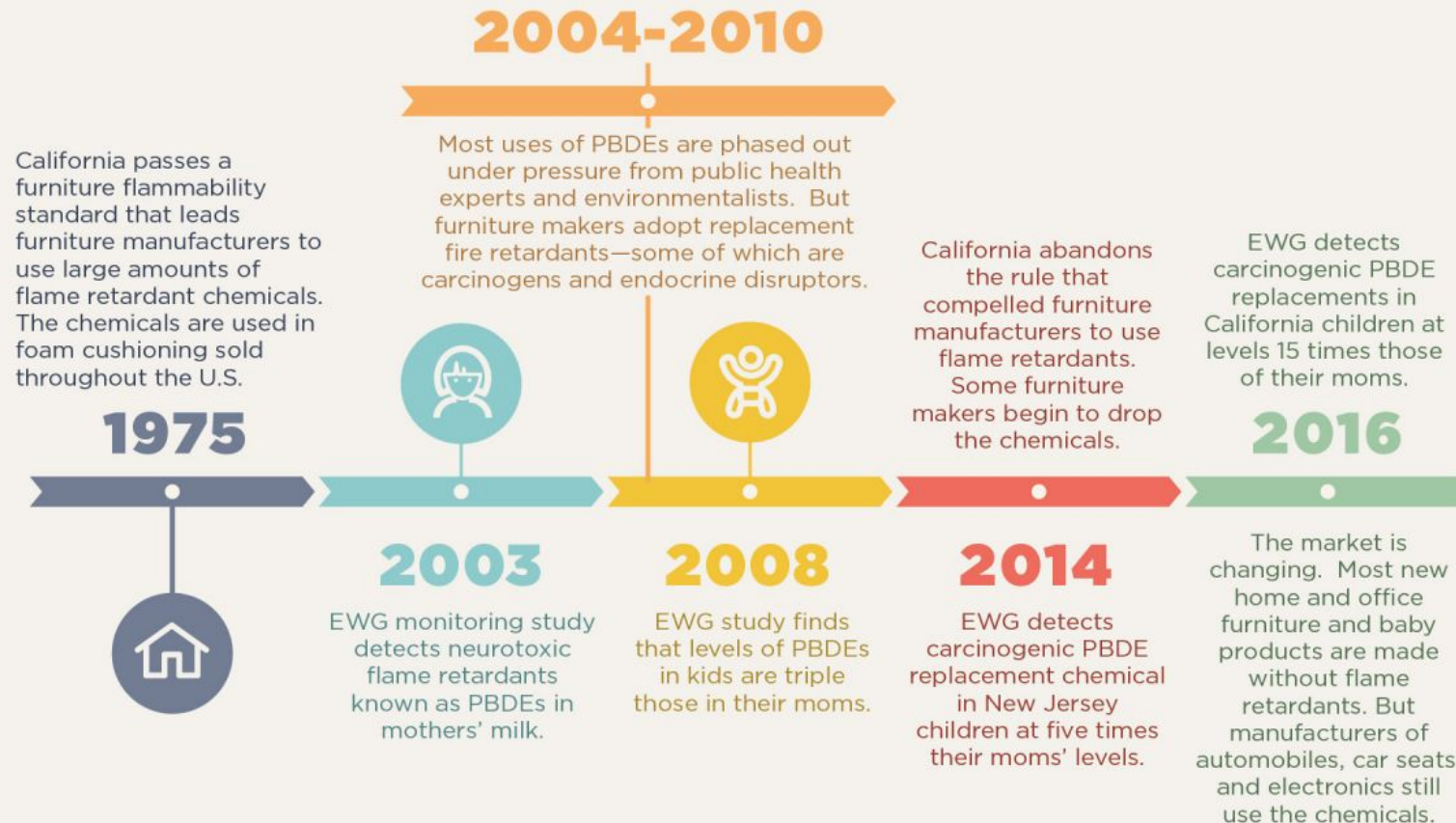
- Used in children's products, furniture, electronics, plastics, building materials, motor vehicles, airplanes, and textiles
- Exposure is from ingestion of food and inhalation
- Chemical composition: Polybrominated diphenyl ether
 - Structurally similar to PCBs
 - Family of chemicals can make over 200 related chemicals

Flame Retardants (PBDEs)

- Chemicals bioaccumulate in blood, breast milk, and fat tissues
- Health impacts include thyroid hormone disruption, permanent learning and memory impairment, behavioral changes, and more
- Leading cause of cancer in Firefighters

Why Flame Retardants?

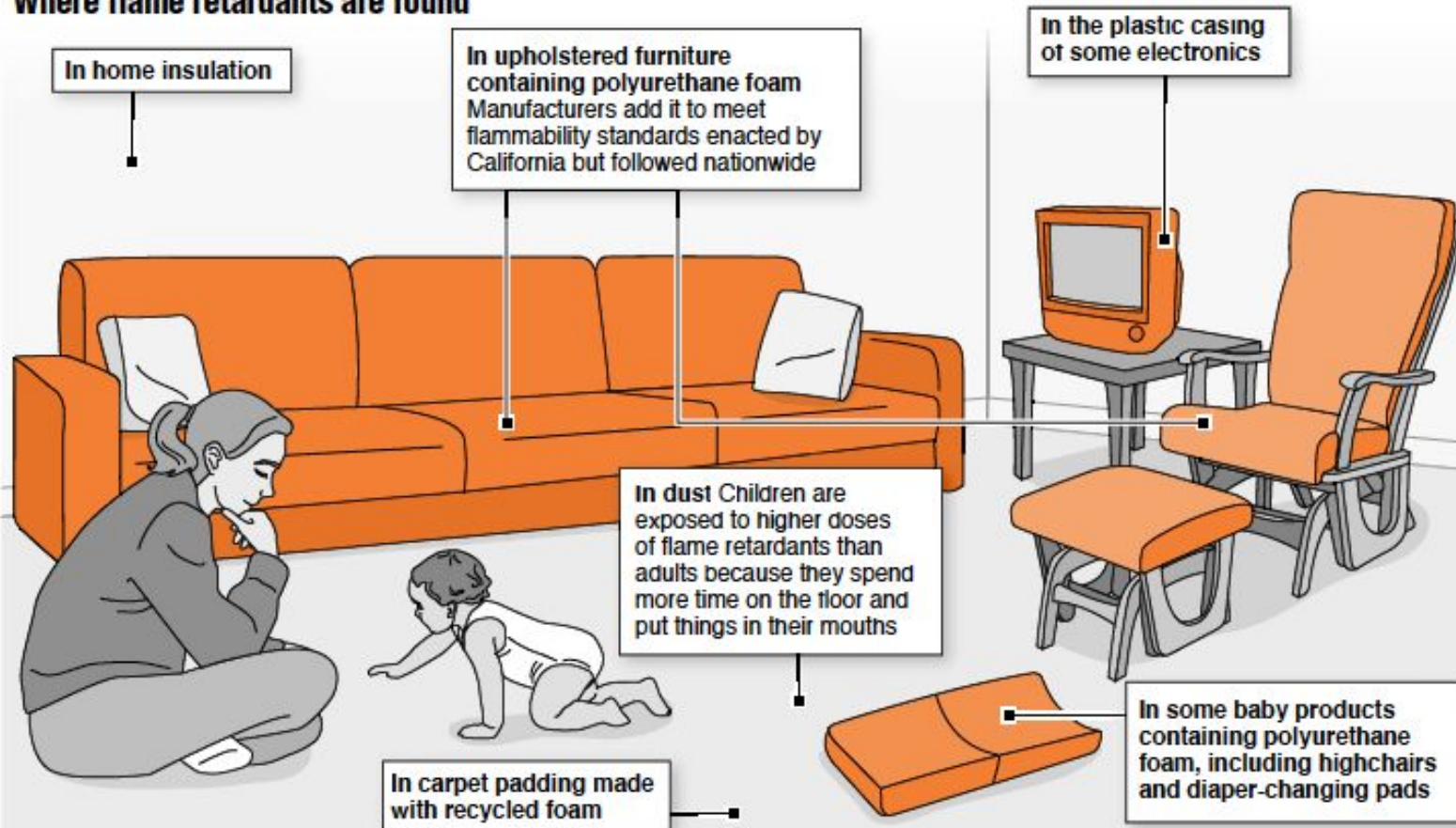
Flame Retardants in Household Products



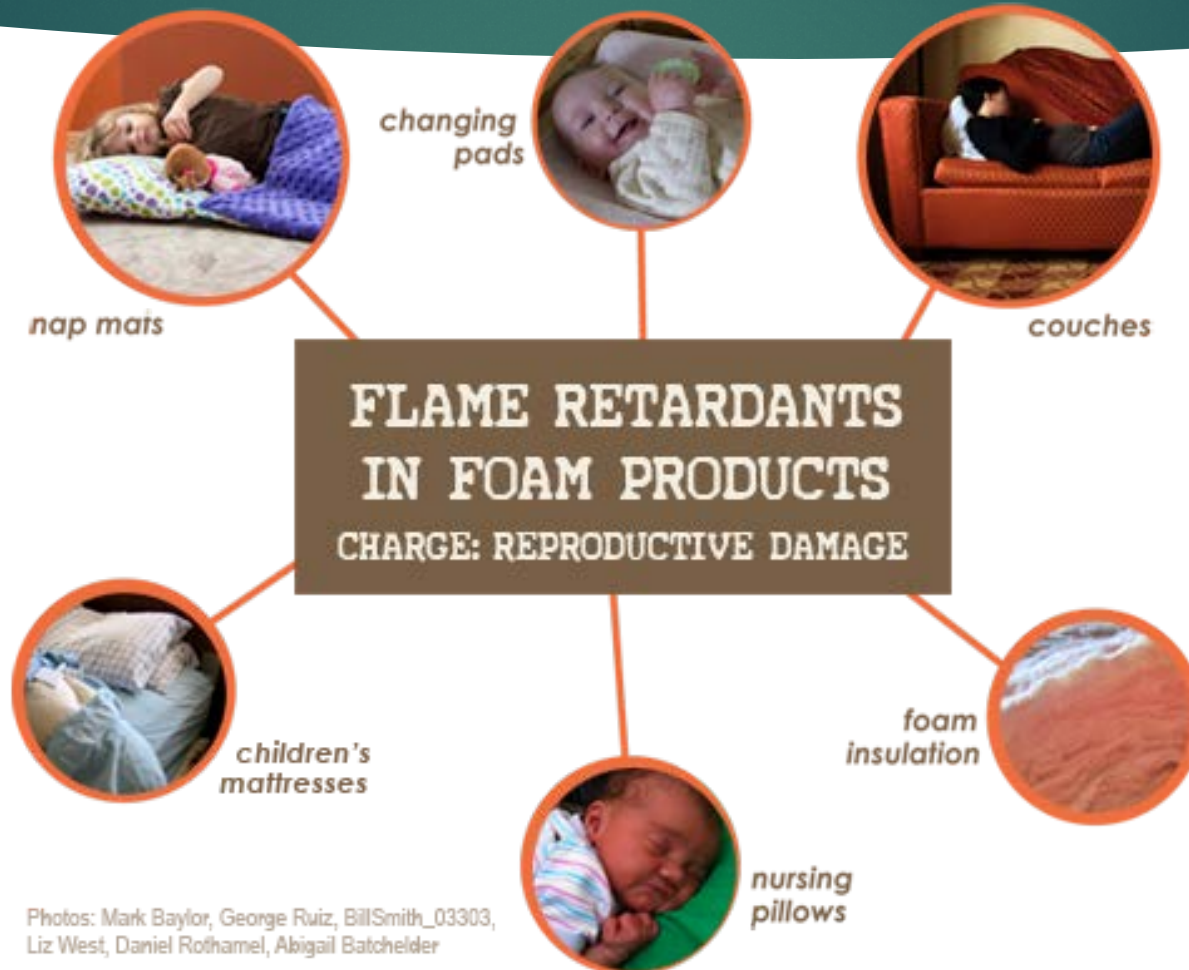
How are We Exposed?

Flame retardants are present in virtually every American home even though some of the compounds have been linked to neurological deficits, developmental problems, impaired fertility and other health risks.

Where flame retardants are found

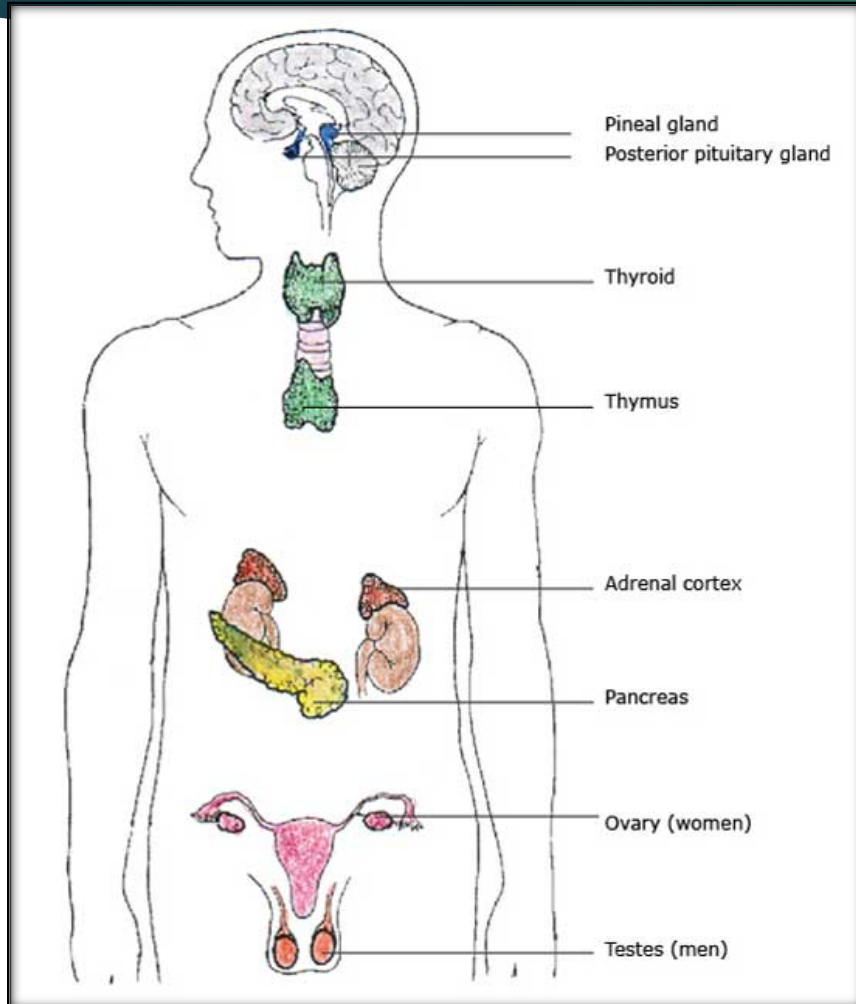


Children's Exposure is a Major Concern

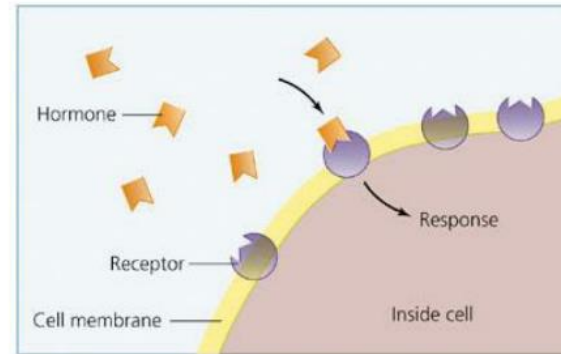


Photos: Mark Baylor, George Ruiz, BillSmith_03303,
Liz West, Daniel Rothamel, Abigail Batchelder

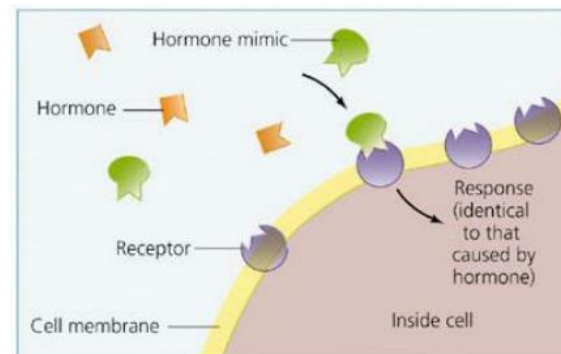
Endocrine System & Endocrine Disruption



Endocrine Disruption



(a) Normal hormone binding

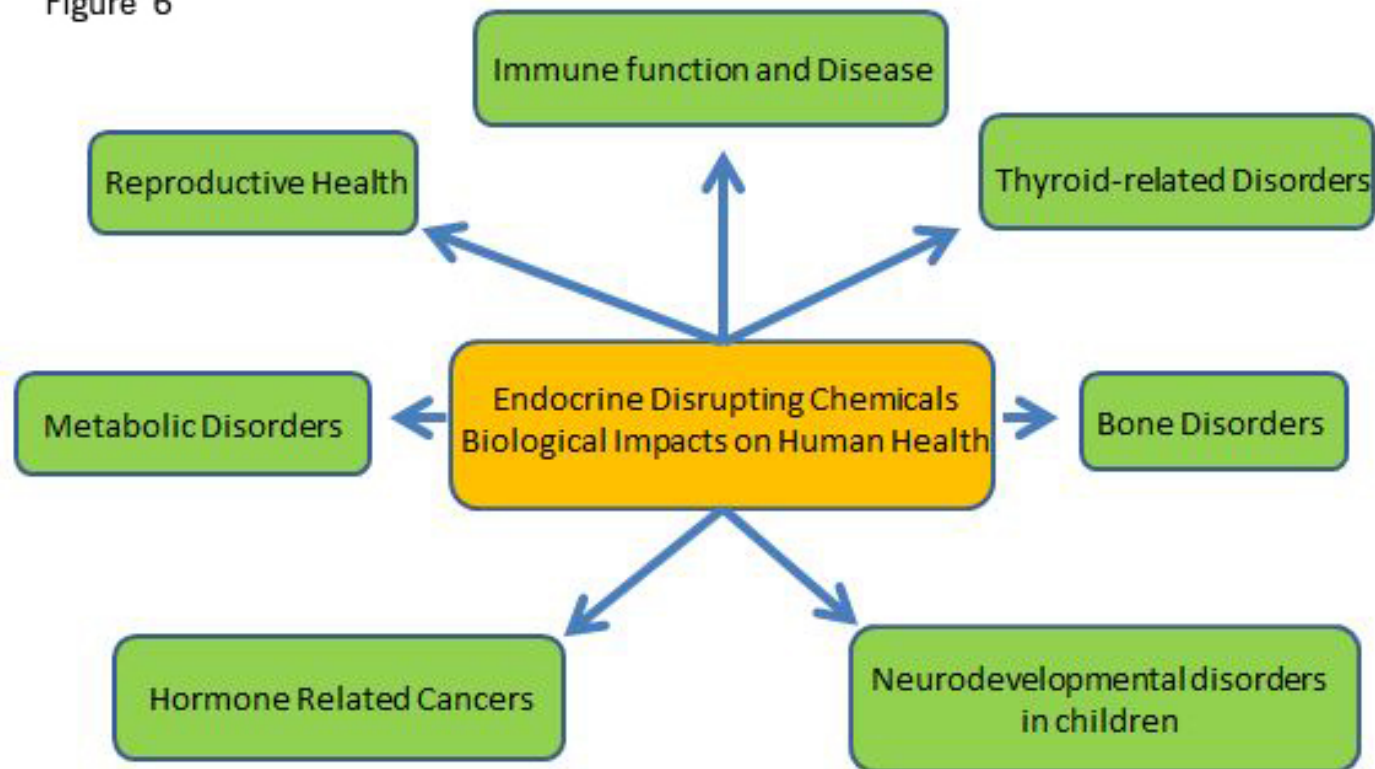


(b) Hormone mimicry

- Some chemicals, once inside the bloodstream, can “mimic” hormones.
- If molecules of the chemical bind to the sites intended for hormone binding, they cause an inappropriate response.
- Thus these chemicals disrupt the *endocrine* system.

Endocrine System & Endocrine Disruption

Figure 6



Source: State of the Science of Endocrine Disrupting Chemicals—2012
Inter-Organization Programme for the Sound Management of Chemicals

Policy Solutions

1

Restrict use of
known
chemicals of
concern

2

Restrict use of
possible
substitutes

3

Conduct
Alaska
research

4

Collaborate
with other
states



Questions?