ENDOCRINE DISRUPTING CHEMICALS (EDCs) ▶ What Policymakers Need to Know

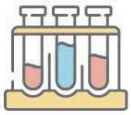
Five Fatal Flaws of today's chemical testing for safety

Most regulatory toxicology tests used to evaluate endocrine disruption are inadequate to the task.

1. Most tests ignore today's diseases

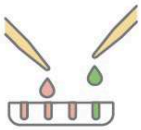
- Most tests are based on decades-old methods, and look for effects on things like organ weight, but not for effects relevant to today's common diseases or disabilities.
- Most tests only look for short-term, not long-term health effects.
- Most tests do not evaluate endocrine disruption; these tests require endocrinological expertise, which most traditional toxicologists do not have.

2. Most chemicals are only tested at high doses, not low doses



- Endocrine disrupting chemicals (EDCs) affect different genes at different doses, which can lead to specific effects at low doses, but different effects at high doses.
- This doesn't mean that high doses are safe; other adverse effects occur at high doses.
- Because regulators only test at high doses, they never detect the low dose effects.
- Testing only high doses cannot predict all the health effects of our current exposures.

3. Chemicals are tested one at a time, not in mixtures



- What's the first question your doctor asks when she prescribes a new medicine? "What medicines are you already taking?"
- That's because chemicals mixed in our bodies interact, and those interactions can alter the effects of exposure.
- We are all exposed to mixtures of chemicals, all the time, and these mixtures have not been tested for safety.

4. Chemicals are not tested for transgenerational effects

- Exposures during development can lead to permanent health effects in later generations without changes in DNA sequence or gene mutations.
- Sometimes the exposure causes no detectable effect on the fetus; effects only begin to appear in the second generation.

5. Regulators ignore independent research

- Regulators discard studies done by independent university researchers, which are of much higher quality than standard regulatory testing.
- The criteria used to discard university research are arbitrary and biased.
- University-based research is conducted by the world's best scientists, peer-reviewed, and funded by governmental institutes of health. Yet it is still ignored by regulators.

Understanding what EDCs are and their effects will help guide smart policy.

For sources, resources, and to keep up to date on endocrine disruptor science, visit **EHSciences.org.**
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