

U.S. EPA Endocrine Disruptor Screening Program

The U.S EPA's Endocrine Disruptor Screening Program (EDSP) is a step-by-step, science based process to identify chemicals that interact with the endocrine system (endocrine-active chemicals), and chemicals that cause adverse health effects as a result of their interaction with the endocrine system (endocrine disruptors) in real life scenarios.

EDSP

STEP 1

EPA prioritizes chemicals for screening based on existing information about potential for endocrine activity and exposure.

Soon, new technology will enable EPA to prioritize and screen substances 100 times faster, which reduces costs, timelines and the need for animal testing.

STEP 2

Eleven different screening analyses are conducted on prioritized chemicals to determine whether they potentially interact with the endocrine system.

Screening analyses have been carefully developed, scientifically validated, and designed to be highly sensitive and protective in nature so they over-identify endocrine activity.

STEP 3

EPA determines which chemicals need further testing, based on the weight of the evidence.

EPA evaluates results from the first round of screens, along with the most relevant, highest quality data from other sources, to determine if the weight of the evidence shows that the chemical has the potential to interact with specific parts of the endocrine system: the estrogen, androgen, and thyroid pathways. Chemicals that do, move forward to testing in Step 4.

STEP 4

Targeted tests are conducted to determine whether the endocrine interaction identified in Step 3 may cause adverse effects.

EPA uses the test results to develop a comprehensive picture of potential adverse effects that could arise from the use of the chemical and the size of the dose that causes them. These chemicals then proceed to Step 5 for further evaluation.

STEP 5

Risk assessments are conducted to determine the possibility of harm.

EPA integrates information about potential harm associated with the chemical (hazards), adverse effects associated with different-sized doses of the chemical (dose-responses), and possible exposures to humans, including sensitive groups, or wildlife, based on real-world conditions, to identify potential risks associated with the chemical's use.

STEP 6 Risk Management



EPA evaluates the real-world conditions under which the chemical is manufactured, transported, used and disposed of, to determine whether additional restrictions may be needed to reduce exposures to protect people and the environment. These restrictions could include limits on concentrations in products, limiting uses, labeling requirements, or even bans.

Under the EDSP, EPA's public health and environmental protection decisions are based on a firm foundation of scientific principles, a robust evaluation of data and information on endocrine activity.