



Environmental Health Fact Sheet

What are Endocrine Disruptors?

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The Community Outreach and Engagement Core (COEC) increases awareness and understanding of environmental health research.

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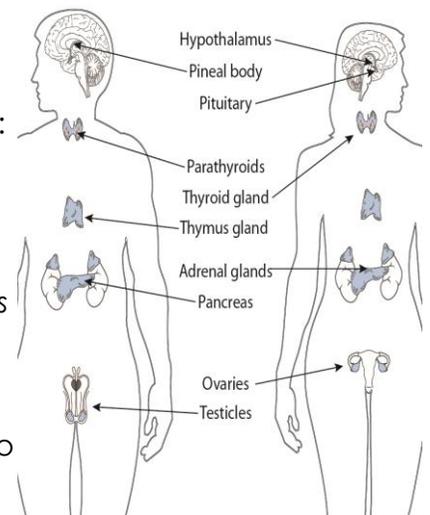
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What is the Endocrine System?

The **endocrine system** is a network of glands in our bodies. These glands make hormones, which affect growth, metabolism (that is, how our body breaks down nutrients and builds cells), and how we develop and function sexually. The endocrine system controls many of our body's processes, from before we are born through old age.

The endocrine system influences the development of our brain and nervous system. Examples of endocrine glands are:

- The *thyroid gland*, which controls body heat, bone growth and metabolism;
- The *ovaries* (in females) *and testicles* (in males), which play a key role in reproduction;
- The *pancreas*, which makes insulin to control blood sugar levels.



What are Endocrine Disruptors?

Endocrine disruptors are chemicals that can throw our bodies out of balance by preventing our endocrine systems from working properly. We may be exposed to endocrine disruptors through absorbing them through:

- Our skin with fabrics and soaps
- Our lungs when we breath
- Our drinking water
- Our foods when we eat

Endocrine disruptors are found in many of the products that we use every day. For some commonly used chemicals that disrupt the endocrine system, see

www.niehs.nih.gov/health/topics/agents/endocrine/

Project Coordinator:

Carol Gray, MPH

ccbgray@umich.edu

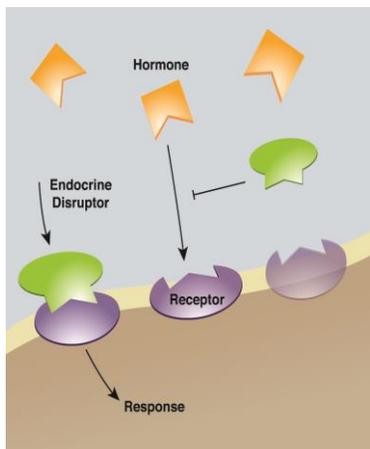
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How do Endocrine Disruptors Affect Our Health?

Endocrine disruptors can cause health problems in many different ways. They can:



- **Act like natural hormones** and fool our bodies into responding inappropriately. For example, the body may produce excessive sex hormones before puberty.
- **Interfere with the function of hormones**, causing the body to respond incorrectly.
- Cause the endocrine system to **produce too little or too much** of a particular hormone, such as reduced insulin production.
- Animal studies have shown that endocrine disruptors affect the nervous system (cognition), reproductive health (fertility problems and early puberty), causes breast, ovarian and prostate cancers, as well as obesity, diabetes and cardiovascular problems. This raises concerns relative to their effects on human health.

What Does this Mean for Me and My Community?

Research on endocrine disruptors would help establish if they are deleterious to human health. Documenting such effects will help educate people, develop prevention approaches, and lead to policy changes that would restrict use of such chemicals.

What do we do while such studies are being conducted?

- Follow the precautionary principle.
- When possible, limit contact with products that are suspected to disrupt the endocrine system. For example, avoid buying foods sprayed with harmful chemicals and wash them properly if purchased.
- Support continued regulation and environmental cleanup of known endocrine disruptors.
- Encourage policy makers to require labels on products that contain known endocrine disruptors (see *Endocrine Primer* at <http://www.epa.gov/endo/pubs/edspoverview/primer.htm>).
- Encourage continued research on products containing chemicals to properly understand their effect on the human body.



The University of Michigan Environmental Health Science Center of Excellence promotes collaboration among UM environmental health researchers and communities. Researchers work together to advance knowledge of environmental health issues that affect community members in Detroit and Southeast Michigan.

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