



Video Transcript: Understanding Endocrine Disruptors and Fertility

This video was created by the Reproductive Health National Training Center (R-H-N-T-C).

Scientific evidence emerging over the past 20 years suggests exposure to toxic environmental chemicals before and during pregnancy can affect reproductive health across the lifespan.

Endocrine disruptors are a type of toxic chemical in our environment that are potentially linked to infertility, miscarriage, and other adverse reproductive health outcomes, although this is not known for sure. More information is needed. Growing concern about these potential harms has led to increased research efforts to examine how exposure to endocrine disruptors may impact health.

So, what are endocrine disruptors? They are natural or human-made chemicals that interfere with the body's endocrine system, which makes hormones and sends them throughout the body.

Hormones are chemical messengers secreted by glands; they regulate many functions in our bodies. Hormone or endocrine disorders occur when a gland produces too much or too little of a hormone.

An endocrine disruptor can mimic the body's natural hormones or alter the production of hormones—decreasing or increasing normal hormone levels. This interference with hormone action can affect the thyroid gland, brain, and reproductive organs, as well as the metabolic and immune systems.

Disruption of normal hormone function can result in endocrine disorders and interfere with fertility. Some research suggests an association between endocrine disruptors and changes in reproductive-related hormones, such as estrogen, gonadotropin, and androgens. Other research suggests an association between endocrine disruptors and fertility. This includes potential negative impacts on sperm concentration, count, motility, and vitality; as well as on egg quality and quantity, ovarian response, menstrual cycle length, and blastocyst formation and implantation.

Endocrine disruptors are common in our environment, and can be found in everyday products. We can be exposed to them through the food we eat, the air we breathe, the water we drink, and the substances we touch or put on our skin.

Examples of endocrine disrupting chemicals include: bisphenol A or BPA, dioxins, phthalates, and polychlorinated biphenyls, or PCBs. These chemicals are found in plastics, food and beverage packaging materials, many types of nonstick pans, cosmetics, personal care products, fragrances, toys, flame retardants, and pesticides.

While exposure to these chemicals is widespread, certain communities are disproportionately affected because of where they live or work. Although exposure to endocrine disruptors is common given their widespread presence in our environments, we don't know how much exposure is too much. And, not everyone who is exposed experiences negative impacts on their health. More research is needed to understand the potential impact of endocrine disruptors on reproductive health and fertility.

Family planning providers can take steps to screen clients for exposure to toxic environmental chemicals and counsel clients on reducing their exposure. Given the central role hormones play in fertility, pregnancy, and human development, screening and counseling during the preconception and prenatal periods is especially important.

Ask clients about their exposure to toxic chemicals in their workplace, home, and recreational activities.

Counsel clients on limiting their exposure by avoiding or minimizing the use of products containing known endocrine disruptors such as BPA, phthalates, and parabens, when possible.

Actions that can reduce exposure to endocrine disruptors include:

- Use non-toxic products, such as vinegar and baking soda, to clean your home.
- Vacuum regularly and use a wet mop to prevent dust from accumulating.
- Don't spray bugs or use pesticides. Instead, try baits and traps to keep insects and rodents out of your home.
- Minimize the use of personal care products, cleaning products, and laundry detergents that contain fragrance.
- Wash fruits and vegetables to remove pesticide residue.
- Minimize consumption of canned food. When possible, choose fresh and frozen food.
- Try to avoid heating or cooking food in plastic containers. Avoid using nonstick pots, pans, and other cookware.

Frame these actions as opportunities to reduce exposure when possible. Acknowledge that all actions may not be feasible most of the time, or at all in some cases. Some individuals and communities may have limited control over their exposures to endocrine disruptors.

Emphasize that small steps add up!

For more information, and to find related resources, go to R-H-N-T-C.org.