Reducing Exposure to Xenoestrogens

Excessive levels of the hormone estrogen, also known as estrogen dominance, are associated with many health problems. One of the most common causes of estrogen dominance is a class of compounds known as xenoestrogens.

Xenoestrogens (literally “foreign estrogen”) are man-made compounds that mimic the effects of natural estrogens in the body. They are similar in function to phytoestrogens, naturally occurring estrogens in plants, but tend to be much stronger. The effects of xenoestrogens on the environment and the human body are still being studied, however, many xenoestrogens are known to increase the effects of estrogen on the body. For this reason, they are believed to be a major contributing factor to many cases of estrogen dominance.

Avoiding xenoestrogens is an important step towards reducing the many symptoms and health problems associated with excessive estrogen levels, including breast cancer, endometriosis, uterine fibroids, PMS, PCOS, and infertility/impotency. It is especially important for pregnant and lactating women, children and teenagers, and those with estrogen-sensitive diseases to reduce exposure to xenoestrogens. Unfortunately, xenoestrogens occur in thousands of everyday items, including everything from food to cosmetics to household goods.

Chemical Pesticides and Fertilizers

One of the most famous xenoestrogens was DDT, which was banned in the United States thanks to Rachel Carson’s groundbreaking work on the ecological dangers of synthetic pesticides. Unfortunately, it is still applied to food and other agricultural products in many other countries, and it can persist in soil for centuries, so despite the ban, many people around the world are still being exposed to DDT on a regular basis.

DDT persists in the human body for decades, where it is stored in fatty tissue such as breasts. Women with detectable levels of DDT in their breast tissue are five times more likely to develop breast cancer than women without detectable DDT levels.

Unfortunately, DDT is not the only agricultural chemical that contains xenoestrogens, and many others remain in legal use in the United States and around the world. It’s estimated that the average American consumes over one pound of pesticides per year. Among the common products known to contain xenoestrogens are atrazine, endosulfan, and methoxychlor.

There was some promising news recently on the pesticide front: for the first time the EPA will require tests on a number of chemicals used as pesticides to determine if they are endocrine disruptors. However, the results are likely to be unavailable for several years at minimum.
How to Avoid Them

- Eat organic foods as often as possible
- Use natural pest control in your home and garden
- Avoid synthetic flea shampoos, flea collars, and flea pesticides for your pets and home
- If you must use synthetic pesticides or fertilizers, follow directions exactly.
- Campaign against pesticide use in schools and workplaces. Children are especially susceptible to the effects of xenoestrogens.

Important Foods to Buy Organic

These crops have the highest residues of xenoestrogens and other endocrine disruptors:

- strawberries
- spinach
- cabbage
- pineapples
- green beans
- asparagus
- apricots
- raspberries
- cherries
- apples
- peaches
- grapes
- sweet peppers

Meat, Dairy, and Eggs

The growth hormones fed to cattle, pigs, poultry, and other livestock are another major source of xenoestrogens, and high consumption of conventionally raised dairy products is especially associated with high estrogen levels, due to the combination of naturally and artificially occurring hormones in the milk.

How to Avoid Them

- Choose organic meat, eggs, and dairy products
- Better yet, choose 100% grassfed meat and dairy products, and pastured pork and poultry
- Reduce your consumption of animal products in general, especially uncultured dairy products
Cosmetics and Toiletries

- Unfortunately, one of the most effective ways to absorb xenoestragens is through skin contact. Xenoestrogens absorbed by the skin are ten times more potent than those taken orally, because they travel directly to the tissues instead of passing through the liver.
- Many types of cosmetics, toiletries, and other products applied directly to the skin contain xenoestrogens. Some shampoos, particularly those aimed at the African American community, even advertise their estrogen (estradiol) content! Nail polish and sunscreen are more common sources of xenoestrogens, including phthalates, benzophenone-3, homosalate, 4-methyl-benzylidene camphor (4-MBC), octyl-methoxycinnamate and octyl-dimethyl-PABA. Other products, including body lotions, toothpastes, soaps, gels, hairsprays, and more may contain xenoestrogens in the form of parabens, phenoxyethanol, phthalates, and other compounds.

How to Avoid Them

- The best source of information about the safety of cosmetics and beauty products is the Skin Deep Cosmetic Safety Database.

Plastics

Plastics, especially soft plastics, contain many compounds that are considered to be xenoestrogens. Phthalates, a type of plasticizer used to make plastics soft and flexible, are an especially common offender. These compounds can leach out or volatize over time or in response to heat or other stimuli. Phthalates are used in products from food storage containers and packaging to children’s toys to certain clothing and footwear items to toiletries to pesticides to IV bags to baby bottles... the list goes on and on.

How To Avoid Them

- Use cling wrap that does not contain DEHA and replace cling wrap on meats and other foods as soon as you get home from the store, unless it is from a chain such as Whole Foods that doesn’t use DEHA cling wrap
- Never heat food with plastic in the microwave, even if it claims to be microwave-safe. Use glass or ceramics instead.
- Avoid Teflon and other non-stick cookware. Cast iron is an inexpensive, durable, and healthful alternative.
- Buy bottled water and other drinks in glass bottles instead of plastic.
- Minimize consumption of foods from tin cans. In the USA, over 85% of tin cans are lined with bisphenol-A (BPA) to reduce the metallic taste that can be present in canned foods. Unfortunately, BPA is a known xenoestrogen that leaches when exposed to heat,
such as the sterilization process some cans undergo, or acid. BPA is also present in many plastic baby bottles, food storage containers, and other products.

- Don’t drink from styrafoam cups or containers.

**Household Cleaners**

Many household cleaners contain xenoestrogens. Particularly dangerous are laundry detergents and fabric softeners, because residues on clothing, towels, and other items are worn against the skin.

Air fresheners and insect repellents are also major sources of xenoestrogens.

**How to Avoid Them**

- Use old-fashioned household cleaners like baking soda, Borax, and vinegar whenever possible.
- Avoid fabric softeners and dryer sheets.
- Use a simple laundry detergent with few chemicals.
- Ventilate your house frequently and well and avoid the use of air fresheners, insecticide foggers, and other products that release chemicals into the air.

**Water**

Unfortunately, water treatment plants are not currently designed to remove hormonal pollutants, and agricultural and pharmaceutical runoff have created a curious epidemic among fish and frogs in many waterways in the developed world. These aquatic creatures are actually **switching gender** due to high levels of effluent estrogen in their watery homes!

Although human bodies are more complex than frogs and fish, the hormonal pollutants can affect us as well when we drink or bathe in water containing them.

Water in many parts of America is also contaminated with agricultural runoff, including many pesticides and fertilizers containing xenoestrogens, and urine and manure from animals fed growth hormones.

**How To Avoid Them**

Don’t switch to bottled water, which is unregulated and may be more polluted than tap water. Instead, install a **reverse osmosis water system**. These can include under sink or whole house systems.

**Other Common Sources of Xenoestrogens**

- Coffee and other caffeinated beverages
- BHA and BHT, the common food preservatives
- FD&C Red No. 3, a common food dye (erythrosine)
- Marijuana

Sadly, with the near-ubiquitous spread of these compounds, no article of this length could possibly be comprehensive. I have done my best to include an overview of some of the most common sources of xenoestrogens in our lives, but I encourage you to read further on the subject and educate yourself, your family, and friends. In the end, voting with your pocketbook and spreading information to enable others to do the same is likely to be the single most important thing you can do to help slow the spread of estrogen dominance and its accompanying health problems.

Recommended Reading

**Hormone Deception: How Everyday Foods and Products Are Disrupting Your Hormones--and How to Protect Yourself and Your Family**

A compelling and informative case against xenoestrogens in household products, foods, and other everyday objects. Includes a room-by-room xenoestrogen tour of your house and advice for combating the problem through legal and legislative action.