

## **What are xenoestrogens and their impact on your health?**

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Xenoestrogens are substances that biologically function like estrogen but are not identical to the physiologically normal hormone. There are three kinds of xenoestrogens: naturally occurring ones such as saponins in the yam species, deliberately manufactured estrogen analogues such as HRT or oral contraceptives and substances manufactured for a different purpose but have estrogen-like properties such as DDT. There tends to be a lack of detoxification methods for the last type, which in a broader sense are also known as endocrine active chemicals or endocrine disruptors. They have been implicated in breast, testicular and prostate cancer and also infertility. Manufacturing of products containing xenoestrogens is full of political controversy with chemical companies reluctant to acknowledge their accountability. This leads one to believe that a person can only be as aware as possible of avoidable sources and support the body's detoxification processes.

A few of the many sources of xenoestrogens include intravaginal spermicide, canned foods, dental sealants, baby bottles, plastic food wrap and containers, herbicides, pesticides and detergents whose alkyl phenols release estrogenic byproducts upon degradation. Hormonally active synthetic chemicals are most likely behind the rise of breast cancer incidence and deaths among older women. Because these substances persist in the body, they can lead to hormone imbalances over long periods of time. Pollutants acting as xenoestrogens will disrupt the body's healthy balance of hormones and interfere with normal liver function, the ramifications of which (including cancer) are extensive and far-reaching. Preservatives in cosmetic products such as parabens are easily absorbed through the skin and accumulate in breast tissue the way PCBs and organochlorine pesticides do.

Since xenoestrogens are impossible to completely avoid, optimizing their metabolism should be one's focus. Probiotics, calcium d-glucarate and foods high in glucaronic acid such as apples and cruciferous vegetables such as broccoli all assist in eliminating xenoestrogens from the body. Another way to enhance metabolism of xenoestrogens is to support the liver detoxification pathways by using antioxidants (Vitamin C, Vitamin E, carotenoids) and sulphur containing foods such as eggs, onions, garlic, and cruciferous vegetables. When thinking of nutrients directly and indirectly involved in the liver detoxification process, however, it would be difficult to name any vitamin or mineral that did not play an important role. Therefore one reasonable approach to enhancing metabolism of xenoestrogens and other toxins to prevent cancer would be to focus on optimizing digestion, rather than taking multiple supplements. With a healthy gut, one would effectively absorb all the necessary nutrients needed for detoxification through one's diet. Eating healthy organic food in a mindful, relaxed way may be one of the more critical steps along with supporting the GI tract for metabolizing xenoestrogens. Eventually, one would hope that chemical industries will stop generating the harmful endocrine disruptors which affect not only our health but future generations and wildlife as well. Until then, you can be aware of avoidable sources and through naturopathic and Chinese medicine, optimize your digestion to support your body's detoxification process to prevent xenoestrogens from disrupting your health.

## **Tips on avoiding known sources of xenoestrogens**

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Frequently the argument made is that the amount of toxins coming from most products is in very small quantities so what's the big deal? There are two reasons this thinking is flawed. One, xenoestrogens and many other toxins bio-accumulate meaning they are not processed by the body very well and end up becoming stored in the fat reserves. All these "small" quantities add up quite quickly because they are so persistent in the body. Two, with the amount of pollution in the air and water today, we are, in a sense, being poisoned all the time from unavoidable sources. If you can avoid known sources and keep your body from overflowing with toxins, why would you not take the time to read labels, transition from plastic to glass and spend a little more money on organic, less toxic products? This is time, money and effort put into the best investment you could possibly make: *your health*. Read onward for tips and resources on how to avoid known sources of xenoestrogens.

## **Tips on avoiding known sources of xenoestrogens continued...**

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Check your cosmetics, soaps, lotions, dish detergents etc. for synthetic chemicals such as parabens, petroleum products (mineral oil is petroleum based) and “fragrance.” Many ingredients for sunscreen protection show estrogenic activity as well. The skin is very effective at absorbing what you put on it. A woman on average swallows 8 pounds of lipstick in her lifetime (no stats on men who kiss those women yet unfortunately) so treat your cosmetics with the same rigor you would with the foods you eat. Read labels and if there are words too complicated to pronounce or you don’t know what they are, they are most likely toxic. Ideally your cosmetics should be as organic as possible since pesticides are another source of xenoestrogens.

Avoid eating and storing foods in plastic. The softer the plastic the more xenoestrogens will leach into foods and drinks. Plastic wrap, plastic bags (Ziploc), plastic water bottles (plastic bike bottles are some of the worst sources) are much more harmful than harder plastic containers such as Tupperware, Nalgene bottles. Use wax paper, glass storage containers and jars or even aluminum foil as an alternative (glass is best).

Never microwave or heat anything in plastic.

The more oil or fat content in the food, the more toxins will leach into it from the plastic—try your best to avoid buying oils, nuts or cheeses stored in plastic bottles/packaging. If you purchase something in plastic packaging such as flax seeds or other nuts, immediately transfer them to a glass jar for storage since the amount of time the food has contact with the plastic also affects the amount of toxins passed into the food.

Store food and drink in glass or stainless steel containers. Check the bottom of your baby bottles and make sure they are not made with plastic #3, 6 or 7 which are more toxic than #1, 2 or 5. Many are unlabelled so call the company manufacturer or switch to glass. (Don’t forget to check soft plastic baby toys and teethingers also which are frequently full of phthalates, another xenoestrogen).

It should also be noted that non-organic meat and dairy can be sources of xenoestrogens in that steroid hormones are used to fatten cattle and poultry.

## **Resources**

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National Geographic has a good site that explains some of the toxins in common products and their less-toxic alternatives:

<http://www.thegreenguide.com/reports/>

For recent developments regarding endocrine disruptors such as xenoestrogens:

<http://www.ourstolenfuture.org/>

Sources/More reading if you are interested:

[The Healthy Living Space](#) by Richard Leviton

[Having Faith—An Ecologist’s Journey to Motherhood](#) by Sandra Steingraber

[Hormonal Chaos](#) by Sheldon Krinsky

[Silent Spring](#) by Rachel Carson

[Environmental Nutrition](#) by B. Levin