

Breast Cancer and the Environment

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The statistics are astounding. One in 9 women will be diagnosed with breast cancer. While not all factors that play a role in the development of cancer are known, we do know that estrogen can be a strong influence. This article focuses on breast cancer, but it should be noted that many other conditions – including prostate cancer and endometriosis — relate to estrogen levels and are exacerbated by exposure to the estrogens within our environment.

What is Estrogen?

Estrogen is a natural hormone produced within our bodies. It stimulates many of the processes involved in female growth and reproduction. Estrogen binds to cells at specific receptor sites (much like a key fits into a specific lock). Upon binding it promotes cell division, especially in tissues with a high number of estrogen receptors, such as the breast and uterus.

Like good and bad cholesterol, there are “good” and “bad” types of estrogen. Generally, the “good” types of estrogen bind loosely to receptors, creating a lesser effect. The “bad” types of estrogens bind more strongly, creating a much stronger effect. These “bad” estrogens are considered major contributors to conditions such as breast cancer.

Where does estrogen come from?

Some estrogen is made naturally within our bodies. Other comes from our diet, drugs, and the environment.

Foods like flax, soy, legumes and certain herbs contain *phytoestrogens* – plant based substances that act like estrogen within our bodies. Because they bind weakly to receptors, these phytoestrogens protect against estrogen related conditions. Essentially, they are filling up receptor sites so that a stronger estrogen can not get in.

We also consume estrogen when we eat animal products such as meat, poultry, and dairy. Dairy cows are often fed estrogen to enhance milk production. Other animals are exposed to drugs or environmental chemicals which accumulate in fat cells and thus are deposited into the milk or meat which we eat. These estrogens are generally stronger and have a negative effect on our bodies.

Chemicals in the environment, known as *xenoestrogens*, bind very strongly within the body, increasing risk of estrogen-dependent conditions. Because we do not have a very effective way of breaking them down, they persist for long periods of time within our bodies, giving them lots of opportunity to act. These chemicals are found in pesticides, plastics, detergents, fire retardants, solvents, and chlorinated water. Organochlorines, for example, have been found to cause breast cancer. Approximately 90% of pesticides contain organochlorines. We consume these on any sprayed fruits and

vegetables. Spraying lawns, homes, or agricultural crops allows the pesticides to leach into ground water. We drink these in through our water supply. Other chemicals are found in plastics. They leach into oily or fatty foods packaged in plastic, may be absorbed into drinks in plastic water bottles, and leach into foods when heated in plastic containers.

Drugs such as the birth control pill, hormone replacement therapy and fertility drugs contain synthetic forms of estrogen. Their effects also play a role in promoting estrogen dependant conditions.

What can you do?

You can minimize your exposure to environmental estrogens and support your body in clearing out some of the harmful estrogens by adopting the following lifestyle tips:

- Eat organic fruits, vegetables, dairy products and meats whenever possible.
- Increase vegetarian proteins such as whole grains and legumes
- Eat steamed broccoli, cauliflower, kale, Brussels sprouts, and bok choy. These foods provide good estrogens for your body.
- Never put hot food into plastic containers.
- Never heat foods in plastic.
- Avoid exposure to chemical pesticides.