What's Best for Breasts

Avoid commonly used chemicals and seek early detection to maintain breast health

By Dorothy Merritt, MD

Breast cancer is not one disease but a complex group of diseases that occur in an environmentally complicated world where, each day, we are exposed to multiple chemical sources. Many of these are linked to breast cancer.

Despite increased diagnostics and new treatments, breast cancer is the second leading cause of cancer death in women—40,000 women still die from the disease annually. A woman is diagnosed with breast cancer every two minutes. In the 1960s, a woman's lifetime risk for breast cancer was 1 in 20. Today it is 1 in 8.

Environmental Links to Breast Cancer

Breast cancer in the United States has risen since World War II, when industry began pumping out pesticides, plastics, solvents, and other chemicals, leaving residues in our air, water, and soil. Today there are over 85,000 synthetic chemicals on the market—preservatives in our lipsticks and body lotions, plasticizers in our water bottles, and pesticides on our fruits and vegetables. A growing body of research evidence strongly suggests that many of these chemicals may cause breast tumors, hasten their growth, or leave mammary glands more vulnerable to carcinogens.

The biggest offenders appear to be endocrine-disrupting chemicals—substances in the environment that are thought to mimic hormones. They have chemical properties similar to hormones that allow binding to hormone-specific receptors on the cells of target organs, where they are thought to cause adverse developmental, reproductive, neurological and immune effects in both humans and wildlife.

These man made chemicals, with unintentional hormone-like activity, include commonly used pesticides and industrial chemicals and their byproducts, which include polychlorinated biphenyls (PCBs), dioxins, and phenols. Some of these phenols are breakdown products of surfactants (typically used as foaming agents), found in soaps and detergents. Also implicated are heavy metals like lead and cadmium.

A highly significant accumulation of heavy metals—cadmium, lead, and mercury, among others—were found in breast cancer biopsy sam-

Key facts about the environment and breast cancer:

- Seventy percent of people with breast cancer have none of the so-called known risk factors like late menopause, having children late in life, and family history of cancer.
- Non-industrialized countries have lower breast cancer rates than industrialized countries. People who move to industrialized countries from countries with low rates develop the same breast cancer rates of the industrialized country.
- Estrogen is a hormone closely linked with the development of breast cancer. Numerous synthetic chemicals, called "xenoestrogens," act like estrogen in our bodies, including common weed killers and pesticides, plastic additives and by-products, and polyvinyl chloride (PVC), used extensively in the manufacture of food packaging, medical products, appliances, cars, toys, credit cards, and rainwear.

ples as compared with healthy breast tissue biopsies (source: *Society of Integrated Sciences*), suggesting that the accumulation of these metals in breast tissue may be closely related to the malignant growth process. Exposure to heavy metals comes from a variety of everyday products including cosmetics, jewelry and handbags, and from some drinking water.

With more scientific evidence emerging nearly every day, one thing is clear: the chemicals in our environment play a role in altering our biological processes, and our exposure to toxic chemicals is connected to our breast cancer risk.

On a positive note, our exposure to chemicals is something we can begin to control. Get to know the chemicals that have been linked to breast cancer and take action to reduce your risk.

Chemicals in Cosmetics and Skincare Products

The cosmetics and skincare industry uses thousands of synthetic chemicals in its products—everything from lipstick and lotion to shampoo and shaving cream. Many of these substances are also used in industrial manufacturing processes to clean industrial equipment, stabilize pesticides and grease gears. Not exactly the kinds of ingredients we should be using on our bodies! These chemicals can be absorbed through the skin and into the bloodstream, causing toxic effects. Beyond the fact that skin can absorb chemicals, many experts agree that absorption through the skin is more dangerous than through the mouth. Substances absorbed into the digestive system go through the kidneys and the liver, where enzymes break them down and often detoxify them, whereas substances absorbed through the skin go through no such process and enter blood circulation without this protection.

There is a laundry list of cosmetic chemical ingredients that are suspected to be carcinogenic. It may be impossible to learn all of them by name, but you can begin to look for some of these common chemical ingredients:

- **Phthalates** (commonly shown as DHEP, BzBP, DBP, DEP, DMP)
- **Parabens** (butylparaben, isobutylparaben, ethylparaben, methylparaben, propylparaben)
- **Ethylene Oxides** ("laureth" ingredients (i.e. laureth-1, laureth-20—the number indicates the average number of units of ethylene oxide in the molecule)

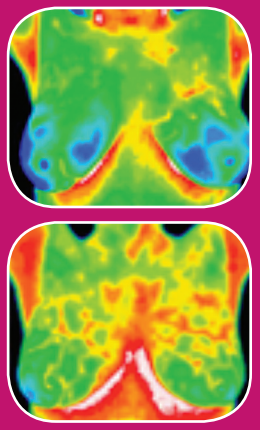
A simple rule of thumb is to avoid products with chemical ingredients you cannot pronounce or are unfamiliar with. As the demand for safer cosmetics and skincare products rises, healthier options will, and are, becoming available. Read the labels!

You have additional options when it comes to reducing your risk of breast cancer. Talk with your doctor about avoiding unnecessary medical radiation and the risks involved with the use of estrogen/progestin hormone therapy. Avoid smoking, limit alcohol consumption, increase physical activity, minimize weight gain, and eat a varied diet rich in green leafy vegetables—choosing organic, pesticide-free varieties of all foods when available. Avoid refined, processed foods—which also contain synthetic chemical ingredients.

Thermography: Earlier Detection Advantage

A study of 100 indeterminate mammogram lesions showed that 62 of 63 lesions (97%) biopsied and proven to be cancer were picked up by thermogram. Studies also show that a thermogram identifies precancerous or cancerous cells earlier than mammogram, and produces unambiguous results, which cuts down on additional testing. And instead of just screening for breast cancer, a thermogram can tell you the health of your breast tissue.

It is widely acknowledged that cancers, even in their earliest stages, need nutrients to maintain or accelerate their growth. In order to facilitate this process, blood vessels are caused to remain open, inactive blood vessels are activated, and new ones are formed through a process known as neoangiogenesis. This vascular process causes an increase in surface temperature in the affected regions, which can be viewed with infrared imaging cameras. Thermography is a form of thermal (infrared) imaging. Additionally, the newly formed or activated blood vessels have a distinct appearance, which thermography can detect.



Heat is also an indication that inflammation exists, and typically inflammation is present in precancerous and cancerous cells, too. (It's also present in torn muscles and ligaments as well as arthritic joints, which thermography can also detect.)

Since thermal imaging detects changes at the cellular level, studies suggest that this test can view changes before the actual formation of the tumor and detect activity 8 to 10 years before any other test, including mammography. Studies have shown that by the time a tumor has grown to sufficient size to be detectable by physical examination or mammography, it has been growing for about 7 years, achieving more than 25 doublings of the malignant cell colony. At 90 days there are two cells, at one year there are 16 cells, and at five years there are 1,048,576 cells—an amount that is still undetectable by a mammogram.

At this time, mammograms are still the standard of care. Consider adding a thermogram to potentially detect cancer earlier. This combination of thermogram and mammogram can be especially helpful for screening people with dense breasts