

Breast Cancer Risk Factors

The only ironclad risk factor for getting breast cancer is being a woman (although a small percentage of men get it, too). Unlike lung cancer, which can be traced directly to smoking, or skin cancer, which is influenced by sun exposure, there's no lifestyle change known for certain to reduce the risk of breast cancer.

"There are a lot of little things you can do that may reduce your risk somewhat," says Barbara Brenner, executive director of Breast Cancer Action, an information and advocacy group for women with the disease. But Brenner and others who've scoured the scientific literature are firm on this point: 70 percent of women who've been diagnosed with breast cancer had no known risk factors – no family history, no genetic markers and nothing in their lifestyle to explain why they got the disease.

What might influence my getting breast cancer?

This much is known about how women get breast cancer, according to the American Cancer Society:

- Fewer than 15 percent of women who are diagnosed have close female relatives with the disease.
- Aging is a factor. About 77 percent of women are over age 50 when they're diagnosed. Women in their 30s make up only 3.5 percent of cases.
- Breast cancer is influenced by estrogen production, so women who started menstruating young (before age 12) or began menopause late (after 50) have a slightly increased chance of getting it.
- Never bearing children or having them after age 30 carries a higher risk; women who have never breastfed are also at a slightly higher risk. The most protective time to have a baby is before the age of 20. The Cancer Society notes that it's been observed since the 19th century that breast cancer occurs with greater frequency in nuns, perhaps because they don't get pregnant. Some researchers suspect that lesbians also may be at greater risk than heterosexual women because they are more likely to have never been pregnant. A study funded by the California Breast Cancer Research Program is examining the issue of breast cancer in lesbians.
- White women are a bit more susceptible to developing breast cancer, but African-Americans are more likely to die from it because they are often diagnosed at a late stage.
- Taking estrogen replacement after menopause may also lead to an increased risk of developing cancerous breast tumors, according to numerous studies comparing women who took hormone replacement drugs with those who did not. One study published in the journal *Menopause* showed that women who took hormone replacement therapy and oral contraceptives had three times the risk of breast cancer as women who took no hormone drugs. And a study published in the July 17, 2002 issue of the *Journal of the American Medical Association* said that after five years, the health risks of hormone replacement therapy (HRT) outweigh the benefits.
- One lifestyle factor that has a clear link to breast cancer in study after study is alcohol consumption. Those findings were reconfirmed in 2000 by researchers with the Canadian National Breast Screening study, which analyzed the drinking habits of 1,336 women with

breast cancer and compared them to more than 5,000 women without the disease. Breast cancer was associated with very high levels of alcohol consumption: Women who had four or five drinks a day were 1.7 times more likely to develop the disease. More moderate drinking appeared not to instigate the disease, however, based on previous studies, the American Cancer Society urges women to limit alcohol to one drink a day.

- A recent report in the Journal of the National Cancer Institute suggests that smoking increases a woman's risk of breast cancer by about 30 percent. Other factors under study are diet (especially saturated fat intake), being overweight (because estrogen is stored in fat cells), and exposure to x-rays and environmental pollutants. Asian women tend not to get breast cancer in their own countries, which some researchers link to a low-fat diet. American women tend to consume more fat than women in Asian countries, but science has been unable to prove a clear connection between dietary fat and breast cancer.
- A study reported in the Journal of the American Medical Association in February 2004 suggests there is a link between antibiotic use and breast cancer. Women in the study who had used antibiotics for a total of 1 to 500 days were about twice as likely to develop breast cancer than women who had never used antibiotics. Does this mean that antibiotics cause breast cancer? Researchers say there's no evidence that this is the case. Because there are so many variables to consider - like the many reasons for taking antibiotics in the first place and the complicated ways that antibiotics affect various bodily processes - more research is needed to understand what the link between antibiotics and breast cancer really means.

One theory is that women who take antibiotics also have lowered immunity systems that may predispose them to breast cancer, researchers said. Another possibility is that antibiotics kill off bacteria in the stomach that may protect women from cancer. Researchers said the data should be used to discourage doctors from overprescribing antibiotics, but should not discourage patients who need antibiotics for serious infections from taking them. They are encouraging further research on a possible link; in the meantime, women should not stop taking prescribed antibiotics and should discuss any concerns with their doctors.

Brenner notes that many risk factors are out of our control. Women can't influence when they started menstruating or reached menopause, and deciding whether and when to have children – especially before age 20 – is by no means a recommended or legitimate form of disease prevention.

What lifestyle changes can lower my risk?

Aside from having no more than one alcoholic drink daily, you might think about exercising and keeping your weight down. The less exercise you get before menopause and the more body fat you have after menopause (body fat traps and stores estrogen), the greater your chances of getting breast cancer seem to be, according to the Cancer Society. Breast cancer organizations suggest that adopting a low-fat diet with lots of fruits and vegetables won't necessarily protect you from breast cancer, but there are plenty of other good reasons (avoiding heart disease and diabetes among them) to take that route anyway.

"All women may improve their overall health and thus perhaps minimize breast cancer risk by maintaining a healthy weight, avoiding cigarettes, limiting alcohol consumption, getting regular exercise and avoiding non-diagnostic ionizing radiation (x-rays)," wrote Dr. Victor G. Vogel last

year in CA: A Cancer Journal for Clinicians. "Nevertheless, no lifestyle modifications have yet been proven to prevent or definitively lower the risk of breast cancer."

How does my family history affect my risk?

If you have a sister, mother or daughter who's been diagnosed with breast cancer, your chances of getting it are doubled. (If you have two close relatives with it - such as your two sisters or your mother and your sister -- your risk goes up fivefold.)

Inherited mutations in certain genes may also increase the likelihood of breast cancer as well as ovarian cancer. About 10 percent of cases are directly due to gene mutations. You can be tested for genetic mutations that indicate a heightened risk of breast cancer, but you'll want to talk to a genetic counselor before going through with this. Women with certain ethnic backgrounds, such as those of eastern European Jewish descent, are more likely to test positive for gene mutations but not more likely to get breast cancer. Only a small number of women have those mutations, and if you have them it doesn't mean you're sure to get the disease. Also, your health insurer may raise your rates on the basis of the results.

How does estrogen affect my risk?

The amount of estrogen you produce over the course of your life is believed to influence your chances of getting breast cancer. Every time you ovulate, your estrogen level rises, causing cells in your breasts to divide (you may have noticed that your breasts are a little swollen or tender for a week or two before your period). And every time cells divide, there's a chance that a mutation leading to cancer will occur.

Will opting for estrogen replacement therapy or taking birth control pills increase my risk?

Researchers at the National Institutes of Health who abruptly halted a portion of the Women's Health Initiative in 2002 were convinced that over the long term, taking estrogen with progestin will do a woman more harm than good. According to the American Cancer Society, women who take birth control pills are at a slightly greater risk of breast cancer than those who don't - though that increased risk disappears once a woman has been off the pill for ten years. A Scandinavian study of 100,000 women reported in the journal *Cancer Epidemiology Biomarkers & Prevention* found that women using birth control pills increased their risk of breast cancer by 60 percent, though a year after stopping the pill, their risk was only 20 percent higher than women who didn't use it.

Which drugs can help prevent breast cancer?

The only drug approved specifically for breast cancer prevention is tamoxifen. If you are among the estimated five to ten percent of American women with multiple close blood relatives who've had breast cancer, taking tamoxifen could reduce your chances of getting the disease by half. If you've already had breast cancer, taking tamoxifen for five years can also reduce your risk of a recurrence by 50 percent. It works by occupying the estrogen receptors on breast cells, so that estrogen can't get at them (the hormone causes breast cells to divide, which may create mutations that lead to cancer). On the downside, tamoxifen can produce the same symptoms as menopause – hot flashes, depression, and vaginal dryness, and some studies show that after five years tamoxifen may promote cancer tumors rather than prevent them. After five years, the risks of taking the drug may outweigh the benefits. Researchers are also studying raloxifene, a drug that's

currently used to treat osteoporosis but may work on breast cells the way tamoxifen does. Raloxifene also offers some of the same benefits as estrogen-replacement therapy, such as prevention against bone loss and possibly even lowered cholesterol.

Should I avoid hormone replacement therapy if I'm at high risk of breast cancer?

This is a complicated issue that you'll need to discuss with your doctor. Taking estrogen after menopause not only helps relieve such symptoms as hot flashes and severe depression but may also reduce your risk of a bone fracture from osteoporosis. After five years, though, according to the Women's Health Initiative, you may be at greater risk for invasive breast tumors. Your doctor can help you weigh the risks and benefits on the basis of your health and your family's medical history.

Why are women in the U.S. more likely to get breast cancer than women in other countries?

American women are four to seven times as likely to get breast cancer as women living in Asia, according to the National Cancer Institute. And when Japanese, Filipino, or Chinese women immigrate to the United States, the risk that they'll develop the disease increases steadily through the generations until it's the same as that faced by women who were born here. Lifestyle factors may account for most of the difference. Women in this country tend to be heavier, drink more alcohol, and have fewer children later in life. The potential role of environmental pollutants and pesticides in the U.S. – and even common household chemicals – is also under scrutiny at Cornell University and the Silent Spring Institute in Newton, Massachusetts.

For more information on breast cancer, visit MyHealth@Anthem powered by WebMD at www.anthem.com.

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