

Preventing Breast Cancer

Doctors can not always explain why one person gets cancer and another does not. However, scientists have studied general patterns of cancer in the population to learn what things around us and what things we do in our lives may increase our chance of developing cancer.

Anything that increases a person's chance of developing a disease is called a risk factor; anything that decreases a person's chance of developing a disease is called a protective factor. Some of the risk factors for cancer can be avoided, but many can not. For example, although you can choose to quit smoking, you can not choose which genes you have inherited from your parents. Both smoking and inheriting specific genes could be considered risk factors for certain kinds of cancer, but only smoking can be avoided. Prevention means avoiding the risk factors and increasing the protective factors that can be controlled so that the chance of developing cancer decreases.

Although many risk factors can be avoided, it is important to keep in mind that avoiding risk factors does not guarantee that you will not get cancer. Also, most people with a particular risk factor for cancer do not actually get the disease. Some people are more sensitive than others to factors that can cause cancer. Talk to your doctor about methods of preventing cancer that might be effective for you.

The breast consists of lobes, lobules, and bulbs that are connected by ducts. The breast also contains blood and lymph vessels. These lymph vessels lead to structures that are called lymph nodes. Clusters of lymph nodes are found under the arm, above the collarbone, in the chest, and in other parts of the body. Together, the lymph vessels and lymph nodes make up the lymphatic system, which circulates a fluid called lymph throughout the body. Lymph contains cells that help fight infection and disease.

When breast cancer spreads outside the breast, cancer cells are most often found under the arm in the lymph nodes. In many cases, if the cancer has reached the lymph nodes, cancer cells may have also spread to other parts of the body via the lymphatic system or through the bloodstream.

Significance of breast cancer

Breast cancer is second only to lung cancer as the leading cause of cancer death among women in the United States. Breast cancer occurs in men also, but the number of new cases is small. Early detection and effective treatment is expected to reduce the number of women who die from breast cancer, and development of new methods of prevention continue to be studied.

Breast cancer prevention

Breast cancer can sometimes be associated with known risk factors for the disease. Many risk factors are modifiable though not all can be avoided.

Selective Estrogen Receptor Modulators (SERMs) for Prevention of Breast Cancer:

SERMs are drugs that act like estrogen on some tissues in the body such as bones, but block the effect of estrogen on other tissues. Tamoxifen is a SERM that blocks the effect of estrogen on breast cancer cells. A large study has shown that tamoxifen lowers the risk of getting breast cancer in women who are at elevated risk of getting breast cancer. However, tamoxifen may also increase the risk of endometrial cancer, stroke, and blood clots in veins and in the lungs. Women who are concerned that they may be at an increased risk of developing breast cancer should talk with their doctor about whether to take tamoxifen to prevent breast cancer. It is important to consider both the benefits and risks of taking tamoxifen.

Raloxifene is another SERM that is being studied for the prevention of breast cancer. A study of postmenopausal women with osteoporosis has shown that raloxifene lowered the risk of breast cancer for women at both high risk and low risk of developing the disease. It is not known if women who do not have osteoporosis would benefit in the same way. Like tamoxifen, raloxifene may increase the risk of blood clots in veins and in the lungs, but does not appear to increase the risk of endometrial cancer.

Hormonal Factors: Hormones produced by the ovaries appear to increase a woman's risk for developing breast cancer. The removal of one or both ovaries reduces the risk. The use of drugs that suppress the production of estrogen may inhibit tumor cell growth. The use of estrogen-progestin therapy, also called combination hormone replacement therapy (HRT), is associated with an increased risk of developing breast cancer. The use of oral contraceptives may also be associated with a slight increase in breast cancer risk.

Beginning to menstruate at an older age and having a full-term pregnancy reduces breast cancer risk. Also, a woman who has her first child before the age of 20 experiences a greater decrease in breast cancer risk than a woman who has never had children or who has her first child after the age of 35. Beginning menopause at a later age increases a woman's risk of developing breast cancer.

Radiation: Studies have shown that reducing the number of chest x-rays, especially at a young age, decreases the risk of breast cancer. Radiation treatment for childhood Hodgkin's lymphoma may put women at a greater risk for breast cancer later in life. A small number of breast cancer cases can be linked to radiation exposure.

Diet and Lifestyle: Diet is being studied as a risk factor for breast cancer. Studies show that in populations that consume a high-fat diet, women are more likely to die of breast cancer than women in populations that consume a low-fat diet. It is not known if a diet low in fat will prevent breast cancer. Studies also show that certain vitamins may decrease a woman's risk of breast cancer, especially premenopausal women at high risk. Exercise, especially in young women, may decrease hormone levels and contribute to a decreased breast cancer risk. Breast feeding may also decrease a woman's risk of breast cancer. Studies suggest that the consumption of alcohol is associated with a slight increase in the risk of developing breast cancer. Postmenopausal weight gain, especially after natural menopause and/or after age 60, may increase breast cancer risk.

Prophylactic Mastectomy: Following cancer risk assessment and counseling, the removal of both breasts may reduce the risk of breast cancer in women with a family history of breast cancer.

Genetics: Women who inherit specific genes are at a greater risk for developing breast cancer. Research is underway to develop methods of identifying high-risk genes.

For more information on women's health, visit MyHealth@Anthem powered by WebMD at www.anthem.com. Also visit the following sites:

National Cancer Institute - www.cancer.gov

American Cancer Society – www.cancer.org

Centers for Disease Control and Prevention – www.cdc.gov

National Institutes of Health – www.nih.gov

Source: National Cancer Institute U.S. National Institutes of Health, www.cancer.gov