

► BREAST HEALTH ◀

Is it normal for my breasts to change?

Yes. Every woman's breasts change during the course of her menstrual cycle, pregnancy, breast-feeding and menopause. Sometimes, however, a change in the size, appearance or feel of your breasts indicates a more serious problem – one requiring a physician's attention.

What kind of problems occur in the breast?

The most common problem is the presence of benign (noncancerous) cysts in the breast – a condition known as fibrocystic change. Cysts are small, fluid-filled lumps, ranging in size from very tiny to the size of a golf ball. Fibrocystic change, which most often affects women between 25 and 50 years old, may cause your breasts to feel tender and heavy. Medical research links fibrocystic breasts to changes in diet. For some women, caffeine stimulates the formation of cysts. Cutting down on the consumption of coffee, tea, cola beverages and chocolate may help to improve breast symptoms.

Approximately 1 in 9 women will develop breast cancer during their lifetime. The word "cancer" refers to a group of diseases, all involving the rapid growth of abnormal cells somewhere in the body. Fortunately, breast cancer can be successfully treated when detected early. Yearly physical examinations, monthly breast self-examinations, and mammography, if your doctor recommends it, greatly increase your chance to detect breast cancer early enough to cure it.

How do I know I have developed a breast problem?

The first noticeable sign of a breast problem is a lump. Both you and your doctor can detect the presence of a lump by doing a physical exam. The earlier you detect a lump, the more successful the treatment of the disease. Because of this, you should get into the habit of performing routine breast self-examination. Many breast lumps are discovered by women practicing regular breast self-exams. During your regular visit, your gynecologist will also examine your breasts for any abnormalities.

How do I examine my breast?

Breast self-exams are easy to perform. Make a commitment to do the examination routinely, every month. Do the exam on the same day each month so that you won't forget. The best time to perform a breast self-exam is a few days after your menstrual period, when your breasts are no longer swollen or tender. Regular breast exams will familiarize you with the way your breasts normally look and feel. This makes it easier for you to notice any changes.

Sit or stand in front of a mirror, and examine the way your breasts look. Have either of your breasts changed in appearance – in size or shape? Watch for puckering or dimpling of the breast skin, and retraction (pushing in) of your nipples. Then, lift your arms and place your hands on your head, and check the appearance of your breasts again. Finally, press your

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hands firmly against your hips and inspect your breasts a third time.

1. Now, lie down. Flatten your right breast by placing a pillow under your right shoulder. Place your right arm behind your head.
2. Use the sensitive finger pads (where your fingerprints are, not the tips) of the middle three fingers on your left hand. Feel for lumps using a circular, rubbing motion in small, dime-sized circles without lifting the fingers. Powder, oil or lotion can be applied to the breast to make it easier for the fingers to glide over the surface and feel changes.
3. Press firmly enough to feel different breast tissues, using three different pressures. First, light pressure to just move the skin without jostling the tissue beneath; then, medium pressure pressing midway into the tissue; and finally, deep pressure to probe more deeply down to the ribs or to the point just short of discomfort.
4. Completely feel all of the breast and chest area up under your armpit, up to the collarbone and all the way over to your shoulder to cover breast tissue that extends toward the shoulder.
5. Use the same pattern to feel every part of the breast tissue. Choose the method easiest for you:
 - **Lines** – Start in the underarm area and move your fingers downward little by little until they are below the breast. Then, move your fingers slightly toward the middle and slowly move back up. Go up and down until you cover the whole area.
 - **Circles** – Beginning at the outer edge of your breast, move your fingers slowly around the breast in a circle. Move around the breast in smaller and smaller circles, gradually working toward the nipple. Don't forget to check the underarm and upper chest areas too.

- **Wedges** – Starting at the outer edge of the breast, move your fingers toward the nipple and back to the edge. Check your whole breast, covering one small wedge-shaped section at a time. Be sure to check the underarm area and the upper chest. After you have completely examined your right breast, examine your left breast using the same method, and your right hand with a pillow under your left shoulder. You may want to examine your breasts or do an extra exam while showering. It's easy to slide soapy hands over your skin and feel anything unusual.

What should I look for when I examine my breasts?

Many breasts feel naturally lumpy. This is no cause for alarm. Pay attention to anything that seems new or unusual – new lumps, puckering, dimpling, a thickening or hardening under the skin, a retraction of the nipple, or any other change in the way your breasts or nipples look. Discharge or bleeding from your nipple also signals a problem.

If you belong to a higher-risk group for breast cancer, you should be especially conscientious about monthly breast self-examination. Factors associated with higher than average incidence of breast cancer include:

- Family history of breast cancer
- Not having given birth to a child
- Late menopause
- Previous abnormal breast tissue (precancerous breast lesions)
- Cancer of the uterus
- Increasing age
- Hormone use, estrogen replacement therapy

Please note that many women who develop breast cancer are not in these high-risk groups.

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What if I discover one of these signs?

None of these warning signs prove that cancer is present – but it might be. If you have any of these symptoms, see your doctor immediately. If you do not have cancer, you will feel reassured. If you do have cancer, the earlier your doctor can begin treating it, the better your chances for cure.

Your doctor will perform a thorough breast examination, similar to the one you do at home. Based on that exam, and on your medical history, your doctor may recommend further tests to determine the cause of your breast abnormalities. These tests include mammography, ultrasound, biopsy and PET scan.

What is mammography?

Mammography is a procedure that uses X-rays to detect minute changes in breast tissues. The American Cancer Society recommends annual mammography at age 40. Mammography can detect cancer and other tumors and cysts long before you would be able to feel them in your monthly self-exam. This early detection significantly increases the chances of successful treatment.

What is ultrasound?

Ultrasound – a painless, noninvasive diagnostic procedure – utilizes sound waves to examine organs inside the body. By bouncing sound waves off your breast, your doctor produces a picture indicating the location and consistency of breast masses.

What is a biopsy?

A biopsy is the removal of a piece of tissue for examination under a microscope. Based on the physical breast examination and the results of the other tests, your doctor may decide to perform this procedure to determine whether your tumors or cysts are cancerous. In a breast

biopsy, the lump is either removed by a surgeon in the operating room or a small sample of the lump is taken using a needle. Examination of the lump under a microscope will tell whether it is benign (not cancerous) or cancerous. Biopsy is the only way to determine for certain whether the lump is cancerous.

For surgical biopsies, to maximize accuracy of removal of the relevant tissue without intruding on healthy tissue, Thomas Jefferson University Hospital radiologists perform a procedure called needle localization. The needle directs the surgeon to the relevant tissue. The needle may be placed using mammography, ultrasound or magnetic resonance imaging (MRI), which uses a large magnet and radio waves to make an image of an interior area of the body.

Some physicians may recommend a core biopsy, a non-surgical procedure performed by a radiologist using a needle. This may be done using mammography, ultrasound or MRI to guide the needle to the relevant tissue. When mammography is used, the procedure is called a stereotactic biopsy. In this procedure, the patient lies face down on a specially designed table with a hole in the center through which her breast extends downward. A revolving mammography unit attached to the underside of the table obtains images of her breast from several angles. This information is relayed almost instantly to a computer, which pinpoints the location of the abnormality. After this, a local anesthetic is administered. Guided by the computer-determined location, the radiologist uses a hollow-core needle attached to a biopsy instrument to retrieve approximately five, three-quarter-inch-long, cylinder-shaped samples of tissue from different areas of the lesion. Then, a pathologist examines the tissue to determine whether or not it is cancerous. The procedure is similar when MRI is used as a guidance mechanism. When ultrasound is used, the patient lies on her back.

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Your doctor may also use a procedure called aspiration or needle aspiration to diagnose and treat cysts. To perform an aspiration biopsy, the doctor inserts a needle into the breast and draws up fluid or tissue for further study. This procedure commonly requires ultrasound, performed by radiologists, to place the needle accurately into the cyst.

If the presence of breast cancer is strongly suspected, your doctor may discuss possible treatment with you before performing the biopsy. If you and your doctor agree on the procedure, your doctor will carry out appropriate treatment at the time of biopsy, eliminating the need for two separate surgeries. More often, you will learn the result of the biopsy and then discuss which treatment to pursue.

What is a PET scan?

Positron emission tomography (PET), a relatively new diagnostic technique for breast cancer, is a combination of nuclear medicine and biochemical analysis that helps to visualize the biochemical changes taking place in the body of patients. A PET scan begins with the injection of a small amount of radioactive material into the patient's vein. Active cells, which often indicate rapid cancer growth, take up the radioactive material. This helps radiologists identify areas where cells are suspiciously active, which can indicate cancer. Foremost among such areas particularly pertinent to breast cancer are the lymph nodes, which filter out and trap cancer cells that have escaped from their original tumors and are attempting to spread to other parts of the body. PET scans are increasingly being performed in conjunction with mammography.

How is breast cancer treated?

Treatment for breast cancer depends on several factors: the location of the cancer cells, the size of the tumor, the type of cancer and the degree to which the cancer seems to have spread.

Your doctor may recommend:

- Sentinel node biopsy to determine whether the cancer has spread to the lymph nodes
- Radiation therapy
- Chemotherapy
- Surgery
- A combination of the above treatments
- Hormonal treatment
- For certain high-risk patients, the drug tamoxifen may be prescribed as a preventive measure. A recent study indicates that tamoxifen prevents return of cancer in a breast that has been treated for cancer and lowers the incidence of new cancers in the other breast.

Treatments involving the surgical removal of the cancerous lump include:

- Lumpectomy – a breast-conserving surgical procedure requiring removal of the lump only
- Mastectomy – removal of the entire breast

If you do have a breast removed, your doctor will start you on a program of exercise to help you return to normal daily activity. Most patients can resume an active and vital life after surgery.

Help with strength, relaxation and skin issues during breast cancer treatment is available at the Jefferson-Myrna Brind Center of Integrative Medicine.

What are clinical trials?

When laboratory research shows that a new treatment method has promise, patients with cancer have the opportunity to receive the treatment in clinical trials or protocols.

By participating in a clinical trial you may have the first chance to benefit from improved treatment methods and the opportunity to make an important contribution to medical science.

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Jefferson Hospital is the only hospital on the East Coast conducting a clinical trial utilizing Active Breathing Coordination (ABC) in conjunction with breast cancer treatment. ABC is a breathing technique that uses respiration to help spare healthy lung, heart and liver tissue from adverse effects of radiation therapy (if a patient's breast cancer is on the left side). Specifically, it is designed to help patients who may have trouble breathing hold their breath in a consistent manner while receiving radiation. This inhalation increases the separation between the breast tissue and the heart, reducing the heart's exposure to radiation during treatment.

Jefferson is also conducting a clinical trial to study the effectiveness of Arimedex, a drug approved by the Food and Drug Administration for the treatment of breast cancer in postmenopausal women with disease progression following tamoxifen therapy.

To find out more about current clinical trials that you may be able to participate in, ask your doctor or call 215-955-1661 or 1-800-JEFF-NOW.

*For an appointment with a Jefferson physician, more information or health information and education programs, please call **1-800-JEFF-NOW** (1-800-533-3669) or visit our Web site at **www.JeffersonHospital.org***

*Jefferson also offers a number of cancer support and education programs as well as a Buddy Program in which survivors of cancer provide support and encouragement to patients who are newly diagnosed and an active cancer advocacy group. You'll find information on the Jefferson Web site about these programs or by calling **1-800-JEFF-NOW**.*

Speech- or hearing-impaired callers can access JEFF NOW® by calling 1-800-654-5984.