



Breast Health

Normal breast tissue is composed of glandular, connective and fatty tissue. The tissue is clustered into lobes and each lobe has a duct that leads to the nipple. Breast tissue is sensitive to the normal ovarian hormonal changes associated with the menstrual cycle. Breast changes, including fullness and tenderness, normally occur prior to the onset of the menstrual period and are caused by the hormonal fluctuations that occur late in the menstrual cycle. These symptoms usually subside spontaneously within 5-7 days of the onset of bleeding.

Benign breast conditions refer to physical changes in the breast that are non-cancerous. The symptoms of benign conditions are similar to those found in breast cancer and may cause great concern until evaluated and explained by a qualified health professional. Two of the most common benign breast conditions are Fibrocystic Breast Condition (FBC) and Fibroadenoma.

Fibrocystic Breast Condition (also called "mammary dysplasia," "benign breast disease," and "diffuse cystic mastopathy") is the most common of the benign breast conditions. With an estimated incidence of over 60% of women, many consider it a variation of normal. Fibrocystic breast changes occur between 20 and 50 years of age and subside with menopause. They are characterized by generalized tenderness and an uneven, bumpy texture caused by increased engorgement of the glands forming multiple small fluid-filled cysts clustered within the breast. Occasionally there is some spontaneous nipple discharge noted. Fibrocystic breast changes usually involve the entire breast but may be more severe in the upper, outer area of the breast. The symptoms may be present throughout the month but normally increase as the menstrual period approaches. It is estimated that 50% of American women may experience some fibrocystic breast changes at some time in their lives. FBC may affect one or both breasts and may change in severity from month to month.

The patient history and exam usually diagnose FBC. It is not normally necessary to have diagnostic tests such as ultrasound or mammography done unless there are abnormal physical findings. It is important to do a monthly breast self-exam (BSE). Breast self-exam may be more challenging for a woman experiencing fibrocystic changes; therefore, it is especially important that she be keenly aware of the normal texture of her breast tissue. Any significant changes should be reported to a health care provider.

Treatment of FBC will vary based on the severity of symptoms. Some common recommendations are listed below:

- Use of properly fitting, supportive bras; these may be worn day and night
- Decrease caffeine intake and methylxanthines (found in coffee, colas, tea, chocolate and many over-the-counter medications)
- Low fat diet
- Decrease/stop smoking
- Vitamin E, 200 IU daily
- Decrease salt intake prior to menses to reduce fluid tension
- Ibuprofen, 200-400mg every 4-6 hours for pain relief or acetaminophen 325-1000mg every 4-6 hours for pain. No more than 4 grams per 24 hours.
- Hormonal contraception such as birth control pills, OrthoEvra™ and NuvaRing® or DepoProvera® or discontinuing the hormones.
- Ice or heat packs as needed.

Most women with FBC will not develop breast cancer. If, upon exam, the breast tissue is very dense, it may be difficult to identify an early cancer. This becomes more significant as the woman becomes older and the risk of cancer increases. For this reason, it is important to do regular breast self-exam.

Women with fibrocystic changes of the breast may develop a lump that is separate from the rest of the fibrocystic tissue. If a biopsy is done, an increased amount of fibrous tissue and/or cysts is often seen. Occasionally there is an unusual multiplication of normal cells found in the cellular lining of the duct creating a condition called hyperplasia. If this hyperplastic tissue looks abnormal or atypical under the microscope the chance of breast cancer occurring in the future can be two-to-five times greater than it would have been otherwise.

The term "**breast lump**" usually refers to an isolated, firm mass identified in the breast tissue. It usually has a defined size and shape. The size may be as small as a pea or as large as a silver dollar. The causes of breast lumps vary and can be benign or malignant. If a breast lump is identified it is important that it be reported to a health care provider no matter how small it may be. Approximately 80% of all breast lumps identified are benign. Breast lumps can be evaluated in several ways. One way to determine if a lump is fluid or solid is to insert a small needle into it and see if fluid can be withdrawn.

Ultrasound exam may also be helpful in diagnosing a breast lump. The sound waves emitted by the ultrasound machine will provide a distinctive pattern if there is fluid present. Ultrasound is a painless procedure that takes only 15-30 minutes to perform. Ultrasound guided needle biopsies of the lump may be used. Digital and film mammograms are exams done by X-rays forming a picture of the breast tissue. A mammogram is not able to identify the presence or absence of fluid within a breast lump. In young women with very dense breast tissue, mammograms may be unable to identify a mass, even when it can be easily identified during an exam; therefore, it is seldom recommended that women below 35 years of age have mammograms. Digital mammograms might be more sensitive for women under 50 years old because the pictures can be manipulated.

Occasionally, fluid will accumulate in an isolated gland causing a specific lump to form. This is referred to as a **cyst**. Cysts may cause localized tenderness and are usually round, smooth and moveable. Women will often report a prominent lump in the breast that seemed to develop suddenly. Cysts vary in size and may first be identified prior to the onset of the menstrual period. It may be smaller or may seem to go away after the period ends. If the lump persists after a menstrual period it should be evaluated by a health care professional. Cysts are not usually associated with breast cancer. If the physician is able to withdraw (aspirate) fluid from the lump, it will usually confirm the diagnosis of a cyst and no further treatment is necessary.

Breast fibroadenoma is the second most common benign breast condition identified. It is usually found in adolescent girls and women in their twenties. This breast lump is usually described as firm, smooth and rubbery feeling. It is usually freely moveable and painless. The size and firmness do not change with the menstrual period. This mass is solid and no fluid will be obtained if aspiration is attempted. Breast ultrasound may be used to differentiate between a cyst and fibroadenoma. The only way to be sure that a solid breast lump is a fibroadenoma versus a cancerous mass is to obtain cells from the breast tissue to examine under a microscope. This can be done by a "core-needle" biopsy or by surgical removal of the mass. Core-needle biopsy involves making a small nick in the skin after administering local anesthesia. The needle is then advanced into the lump and a "core" of tissue is obtained. The tissue sample is then sent to a pathologist for inspection under a microscope. The other option is to have the lump surgically removed. Fibroadenomas may recur after surgical removal and women may develop several different fibroadenomas over a period of time.

Fibroadenomas do not contain cancer cells but the type of fibroadenoma and family history may influence a woman's risk of developing cancer in the future. Therefore all women with a history of fibroadenoma need to be significantly diligent in doing monthly breast self-exam and having regular mammography after the age of 40.

Nipple discharge is another fairly common symptom reported to health care professionals and may be benign or indicate the presence of a cancerous condition. A milky nipple discharge may be related to hormonal fluctuations or the use of hormonal contraception. The presence of a spontaneous, non-milky discharge may be indicative of a serious underlying breast condition.

Nipple discharge occurring from both nipples is less likely to indicate a malignant condition. It is recommended that any woman experiencing spontaneous nipple discharge, regardless of the color or thickness, schedule an appointment for a breast exam.

A Word about Breast Cancer

The most common symptoms of breast cancer are:

- Painless breast mass - 66%
- Painful breast mass - 11%
- Nipple discharge - 9%

Breast cancer risks increase as a woman nears the age of 40. The American Cancer Society recommends that women begin routine mammography screening at 40 years of age. The frequency of repeat exams may vary according to the family and medical history, but are usually performed every 1-2 years and yearly after 50 years of age. Family history plays only a small part in risk assessment. Women with a family history of two first-degree relatives (mother or sisters) should seek consultation with a geneticist to see if they may possess an inherited gene that would significantly increase their risk of cancer. Family history of a second-degree relative (grandmother or aunt) increases risk by approximately 10%. Other factors that influence risk of breast cancer include age related factors regarding onset of menses; birth of first child; menopause; alcohol use; smoking and personal history of breast cancer.

Breast Self-exam

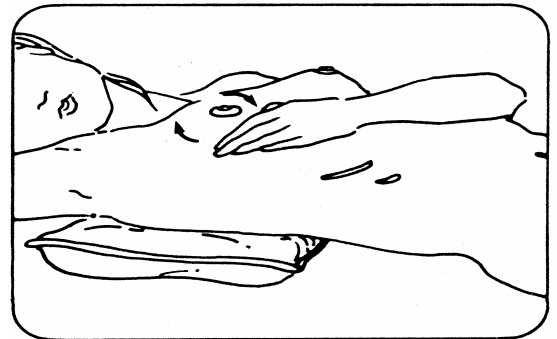
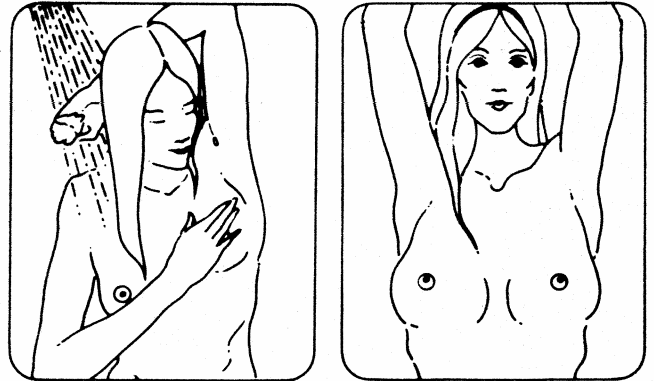
It is well documented that monthly breast self-exam improves the early identification of breast lumps. Women diagnosed with breast cancer have an improved survival rate of 10-13% when the mass was identified by breast self-exam due to earlier detection.

Self-examine Your Breasts Monthly

Breast self-exam should be performed within 7-10 days after the start of a menstrual period. If you have had a hysterectomy or no longer menstruate, examine your breasts on the first day of each month. Doing the exam in the shower allows the fingers to glide easily over wet, soapy skin.

Follow this procedure:

- Raise one hand up placing your hand behind your head and use the opposite hand to examine the breast.
- Using the pads of the middle three fingers, feel for swollen or lumpy areas. Move the fingers in small circles to feel the tissue beneath the fingers.
- Slide the fingers to the next area to be examined. Start at the outside border of the breast and work your way around the breast and into the nipple area. Avoid lifting the fingers from the skin to be sure you cover all areas of the breast. Also check under the arm and around the collarbone for lumps or swelling.
- Examine the other breast in the same manner.
- Stand in front of a mirror and visually examine both breasts for changes in shape or contour by clasping hands behind head and press forward. Then move hands to hips and lean slightly forward. Observe for dimpling, puckering, flaky, red, or swollen skin, nipple changes or spontaneous nipple discharge.
- Lie down on your back. Put a small pillow or folded towel under the shoulder of the side you're examining. Follow the above steps, as you did in the shower. You may use lotion on your fingers to increase sensation and make it easier to slide your fingers across the skin. Change sides and repeat.



Summary

If you find anything unusual - a specific lump or firm knot, nipple retraction, skin dimpling, or any other change that does not seem normal for your breasts, contact your health care provider right away. Breast self-examination is a valuable, preventive health practice for women. Developing a regular pattern will enhance your skills and help you notice changes.

References

Stenchever, Morton A., Droegemuller, William, Herbst, Arthur, Mishell, Daniel R., *Comprehensive Gynecology*, 54th Edition; Mosby 2007, pages 327-357.

Benign Breast Disease and Breast Cancer Tutorial; Dr. William H. Goldberg, University of Wisconsin National Institute of Health: MEDLINEplus Medical Encyclopedia, a service of the U.S. National Library and the National Institute of Health web site: <http://pubmed.gov/>

Berek and Novaks *Gynecology*, 14th edition, 2007, pages 637-659. UpToDate, 2009.

If you are a registered University of Illinois student and you have questions or concerns, or need to make an appointment, please call: **Dial-A-Nurse at 333-2700**

If you are concerned about any difference in your treatment plan and the information in this handout, you are advised to contact your health care provider.

Visit the McKinley Health Center Web site at: <http://www.mckinley.illinois.edu>