

Breast Exam

Anatomy

- Mammary gland:
 - Located within the hypodermis of the breast anterior to the pectoral muscles
 - Consists of 15-25 lobes that radiate around and open at the nipple, each lobe is separated by fibrous connective tissue and fat
- Lobules
 - Enclosed within the lobes
 - Contains glandular alveoli that produce milk during lactation
- Lactiferous ducts:
 - Open to the outside of the nipple
- Lactiferous sinus
 - Dilated region where milk accumulates
- Suspensory ligaments
 - Formed by the interlobar connective tissue
 - Attaches the breast to muscle fascia and to dermis providing natural support
- Areola
 - Ring of pigmented skin which surrounds the nipple
 - Large sebaceous glands give it a bumpy texture and produce sebum that reduces chapping and cracking of skin
- Nipple
 - Round protrusion that contains the outlets for the lactiferous ducts

Indications:

- Well woman exam
- Breast cancer screening

Technique (female)

Inspection:

1. Patient in a sitting position, disrobed to the waist, arm at side
2. Inspect the breasts/nipples for size and symmetry, contour, edema, visible swelling, retractions, erythema or dimpling of the skin, and an increased prominence of the venous pattern
 - a. To bring out dimpling/retractions that may not be visible, ask the patient to raise their arms over their head, press hands against hips, and lean forward
3. Compare one side with the other
4. Note any masses, dimples, marked asymmetry, skin changes (discolorations, ulcerations), or other abnormalities
 - a. Some asymmetry is common

Palpation:

1. Patient supine, disrobed to the waist
2. Plan to systematically palpate a rectangular area extending from the clavicle to the inframammary fold (bra line), and from the midsternal line to the posterior axillary line and well into the axilla for the tail of the breast
 - a. A thorough exam will take approximately 3 minutes per breast

- b. Use the finger pads of the 2nd, 3rd, and 4th fingers, keeping the fingers slightly flexed
 - c. Palpate in small concentric circles using light, medium, and deep pressure
3. Examine the breast tissue for consistency, tenderness, nodules
 - a. If nodules are present, describe the location, size, shape, consistency, delimitation, tenderness, and mobility
4. Lateral breast:
 - a. Ask the patient to roll onto the opposite hip, placing their hand on their forehead (keep the shoulder pressed against the exam table)
 - b. Begin palpation in the axilla, moving in a straight line down to the bra line
 - c. Move the fingers medially and palpate in a vertical strip up the chest to the clavicle
 - d. Continue in vertical overlapping strips until you reach the nipple
5. Medial breast:
 - a. Ask the patient to lie with her shoulder flat against the exam table, place patients hand at neck and elbow even with shoulder
 - b. Palpate in a straight line down from the nipple to the bra line then back to clavicle
 - c. Continue in vertical overlapping strips to the midsternum
6. Nipple:
 - a. Palpate each nipple, note the elasticity and presence of discharge
7. Repeat procedure on opposite side

Technique (male)

1. Inspect the nipple and areola for nodules, swelling, and ulceration
2. Palpate the areola and breast tissue for nodules
 - a. If the breast appears enlarged, distinguish between the soft fatty enlargement of obesity or the firm disc of glandular enlargement (gynecomastia)

Mastectomy, Breast Augmentation/Reconstruction Patient

1. Inspect the scar for any masses or unusual nodularity
 - a. Note any change in color or signs of inflammation
2. Palpate gently along the scar using a circular motion with 2-3 fingers
 - a. Pay special attention to the upper outer quadrant and axilla
 - b. Note any enlargement of the lymph nodes or signs of inflammation/infection

Breast Self-Exam Instructions:

1. Lie down with a pillow under your right shoulder and place your right arm behind your head
2. Use the pads of your 3 middle fingers on your left hand to feel for lumps in the right breast
3. Press firmly in an up-and-down (strip), circular, or wedge pattern to check the entire breast from the underarm to the sternum and collarbone to ribs below the breast
 - a. Use the same pattern each time
 - b. Apply firmer pressure for to feel tissue closer to the chest and ribs
 - c. A firm ridge in the lower curve of each breast is normal
4. Next, stand in front of a mirror with your hands pressing firmly down on your hips

5. Observe your breasts for any changes in size, shape, contour, or dimpling, and redness/scaling of the nipple
6. Raise your arm and place your hand on the back of your head
7. Observe/examine each underarm using the pads of your three fingers
8. Note any lumps, bumps, changes in breast texture, unusual discomfort, nipple discharge (e.g. pus, blood)
 - a. If any of these are present, see your doctor immediately
9. Patients should perform the self-exam monthly, preferably at the onset of menses or 1-2 days after

Normal Findings

- Normal consistency of breast tissue is quite variable; often described as “like a bean bag”
- Milk glands feel like radiating strands of firm tissue having a variable degree of granularity
 - Swelling, tenderness, and greater prominence of the glandular elements may be noted in the week before and during menses
- “Thickening” occurs most commonly in the upper outer quadrant of the breast (due to presence of more glandular tissue)
- The inframammary ridge (a firm transverse ridge of tissue along the lower edge of the breast) should not be confused with a tumor
- There is a cavity under the nipple whose edge may feel like a lump

Notes

- Of the specific patterns of examination (e.g. in spiral, radial, and vertical strip pattern), the vertical strip pattern is currently the best validated technique for detecting breast masses
- Enhanced breast self-awareness is associated with an increased likelihood of earlier detection of breast cancer
 - The awareness of something being wrong has been shown to correlate with 50%-70% of women subsequently being found to have breast cancer
- Comparing the findings in both breasts may help ascertain what is normal to that patient

References:

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