

Procedure #5: Assessing an Apical Pulse

PURPOSES

- To obtain the heart rate of an adult with an irregular peripheral pulse
- To establish baseline data for subsequent evaluation
- To determine whether the cardiac rate is within normal range and the rhythm is regular
- To monitor clients with cardiac, pulmonary, or renal disease and those receiving medications to improve heart action

Equipment

- Clock or watch with a sweep second hand or digital seconds indicator
- Stethoscope
- Antiseptic wipes

Performance

1. Prior to performing the procedure, introduce self and verify the client's identity using agency protocol. Explain to the client what you are going to do, why it is necessary, and how he or she can participate. Discuss how the results will be used in planning further care or treatments.
2. Perform hand hygiene and observe appropriate infection prevention procedures.
3. Provide for client privacy
4. Position the client appropriately in a comfortable supine position or in a sitting position. Expose the area of the chest over the apex of the heart.
5. Locate the apical impulse. This is the point over the apex of the heart where the apical pulse can be most clearly heard.
 - Palpate the angle of Louis (the angle between the manubrium, the top of the sternum, and the body of the sternum). It is palpated just below the suprasternal notch and is felt as a prominence.



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- Slide your index finger just to the left of the sternum, and palpate the second intercostal space.
- Place your middle or next -finger in the third intercostal space, and continue palpating downward until you locate the fifth intercostal space.
- Move your index -finger laterally along the fifth intercostal space toward the midclavicular line. Normally, the apical impulse is
- palpable at or just medial to the midclavicular line



6. Auscultate and count heartbeats.

- Use antiseptic wipes to clean the earpieces and diaphragm of the stethoscope.
- Warm the diaphragm of the stethoscope by holding it in the palm of the hand for a moment
- Insert the earpieces of the stethoscope into your ears in the direction of the ear canals, or slightly forward.
- Tap your finger lightly on the diaphragm.
- Place the diaphragm of the stethoscope over the apical impulse and listen for the normal S1 and S2 heart sounds, which are heard as "lub-dub."
- Each lub-dub is counted as one heartbeat.
- If you have difficulty hearing the apical pulse, ask the supine client to roll onto his or her left side or the sitting client to lean slightly forward.



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- If the rhythm is regular, count the heartbeats for 30 seconds and multiply by 2. If the rhythm is irregular or for giving certain medications such as digoxin, count the beats for 60 seconds.

7. Assess the rhythm and the strength of the heartbeat.

- Assess the rhythm of the heartbeat by noting the pattern of intervals between the beats. A normal pulse has equal time periods between beats.
- Assess the strength (volume) of the heartbeat. Normally, the heartbeats are equal in strength and can be described as strong or weak.

8. Document the pulse rate and rhythm, and nursing actions in the client record. Also record pertinent related data such as variation in pulse rate compared to normal for the client and abnormal skin color and skin temperature.

SAMPLE DOCUMENTATION

2/24/16 1000 Radial pulse 116 & irregular. Had been 82 & regular at 0600. T, R, & BP within client's usual range. C/o being a "little dizzy." Skin warm & dry. Apical pulse 120, irregular, with brief pause after q 3rd beat. MD notified & ECG ordered. _____ G. Chapman, RN

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