

Assessing Respiratory Rate

Overview

- Establish baseline data.
- Monitor respiratory rate, depth, and rhythm.
- Assess patient for presence of dyspnea or cyanosis.
- Assess for abnormal lung sounds, such as rales, rhonchi, or wheezes.
- Note respiratory rate, rhythm, and depth.
- Note labored, difficult, or noisy respirations or cyanosis.
- Identify alterations in respiratory pattern resulting from disease conditions.
- Assess if accessory muscles are used for breathing.

Preparation

- Assess rate when patient is at rest.

Special Considerations

Pediatric Patients

- Respirations range from 30 to 80 per minute in newborns. Children 1 to 3 years of age have a normal respiratory range of 20 to 40 breaths per minute. Children 6 to 8 years olds have respiratory rates that range from 15 to 25 breaths per minute, as do 10-year-old children.

Elderly Patients

- Chronic illness in the older population can affect respiratory patterns.

Equipment

- A watch with a second hand

Procedure

- Place the patient in a position of comfort, preferably sitting. *Discomfort can cause the patient to breathe more rapidly.*
- Place the patient's arm in a relaxed position across the abdomen or lower chest, or place your hand directly over the patient's upper abdomen. *This is the same position used during the assessment of the pulse. Both the patient's and the nurse's hands rise and fall during the respiratory cycle. Measurement of the respirations is done immediately after the pulse assessment and is not perceived by the patient.*
- Observe the complete respiratory cycle (consists of one inspiration and one expiration). *This ensures that the count will begin with a normal respiratory cycle.*
- Once a cycle is observed, monitor the watch's second hand and begin to count the rate of respirations. When the second hand reaches a number on the dial, count "one" to begin the first cycle. *Timing of the respirations begins with a count of 1. Respirations occur more slowly than the pulse; therefore, the count begins with 1.*
- For adults, count the number of respirations in 30 seconds, then multiply by 2. For infants or young children, count the respirations for 1 full minute. *The respiratory rate is equivalent to the number of respirations per minute.*

- If an adult's respirations have an irregular rhythm or they are abnormally fast or slow, count for 1 full minute. *This ensures an accurate measurement.*
- While counting, note whether the depth of respirations is shallow, normal, or deep and whether the rhythm is regular or altered. *The character of ventilatory movements may indicate specific alterations in respirations or disease states.*
- Record the results in the chart or the flow sheet. Report any signs of respiratory alterations to the physician. *This provides data to monitor for changes in the patient's condition. Abnormalities require medical intervention.*

Respiratory Rates and Rhythms

Type	Description
Kussmaul's respiration	Respirations that are regular but abnormally deep and increase in rate
Biot's respiration	Periods of respiration of equal depth, alternating with periods of apnea (absence of breathing)
Cheyne-Stokes respiration	Gradual increase in depth of respirations, followed by gradual decrease and then a period of apnea
Apnea	Absence of breathing

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