

BLOOD GLUCOSE COLLECTION FOR GLUCOMETER

CAPT_GLU_0500

ALERT

Failure to follow manufacturer guidelines pertaining to glucose meter use may cause inaccurate results.

Do not milk finger or wick blood onto the reagent strips as this may cause inaccurate results.

Failure to recognize inaccurate results can lead to errors in management and death.

1. Perform hand hygiene before patient contact.
2. Introduce yourself to the patient.
3. Verify the correct patient using two identifiers.
4. Assess the patient's understanding of the procedure and its purpose.
5. For a patient with diabetes mellitus, determine whether he or she understands how to perform the test and realizes the importance of glucose monitoring.
6. If the patient has not been diagnosed with diabetes, consider any history of hypoglycemia or hyperglycemia and related symptoms.
7. Determine whether conditions (e.g., fasting after meals, after certain medications, or before insulin doses) must be met before or after sample collection.
8. Determine if any risks exist for performing capillary puncture (e.g., low platelet count, anticoagulant therapy, bleeding disorders).
9. Assess the integrity of the skin being used as the puncture site.
 - a. Inspect fingers, toes, or heels.
 - b. Consider alternative sites (e.g., palm, forearm, thigh), if the meter is able to provide accurate readings from these sites.
 - c. Avoid areas of bruising and open lesions.
10. Review the practitioner's order for the time or frequency of measurements.
11. Perform hand hygiene and don gloves.
12. Explain the procedure to the patient and ensure that he or she agrees to treatment.
13. Clean and disinfect the meter per the manufacturer's instructions.

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14. Remove gloves, Perform hand hygiene, and don clean gloves.
15. Instruct or assist the patient with performing hand hygiene with soap and warm water.
16. Check the code and expiration date on the reagent strip container. Remove a reagent strip from the container and then tightly seal the cap.
17. Turn the glucose meter on, if necessary.
18. Ensure that the blood glucose meter is calibrated correctly per the manufacturer's instructions.
19. Enter or scan the patient's identifying information into the meter per the manufacturer's instructions.
20. Choose the puncture site.
 - a. Ensure that the puncture site is vascular.
 - b. For an adult, select the lateral side of the finger; avoid the central tip of the finger, which has a denser nerve supply. If the meter allows, also consider using the forearm, thigh, or fleshy part of the hand.
21. Hold the finger being punctured in a dependent position.
22. Clean the site with an antiseptic swab and allow it to dry completely.
23. Obtain a blood sample.
 - a. Remove the cover of the lancet or bloodletting device. Hold the lancet perpendicular to the puncture site and pierce the finger quickly in one continuous motion. Do not force the lancet.
 - b. If using a single-use, auto-disabling lancet device with an automatic blade retraction system, place the bloodletting device firmly against the side of fingertip or other selected site and push the release button, causing the needle to pierce the skin.
24. Wipe away the first droplet of blood with a cotton ball or gauze as indicated. **Always refer to the manufacturer's instructions for specific directions because all meters are slightly different.**
25. Gently squeeze the finger without touching the site until a sufficient droplet of blood has formed. Repuncture at a new site if the drop is not large enough to ensure accurate test results.
26. Apply the blood sample to the reagent strip according per the manufacturer's directions. (Some devices require the blood sample to be applied to the reagent strip before inserting the strip into the meter, whereas others require inserting the reagent strip into the meter before applying the blood sample.)
27. Obtain the test results.

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28. If the glucose meter displays “low” or “high” instead of a numeric result, repeat testing. If the meter again displays “low” or “high,” notify the practitioner immediately. **Abnormal values must be evaluated immediately and appropriate treatment initiated per the organization’s practice.**
29. Provide absorbent gauze or apply an adhesive bandage if needed to control bleeding at the puncture site or if the patient desires.
30. Turn the meter off.
31. Clean and disinfect the meter per the manufacturer’s instructions.
32. Assess, treat, and reassess pain.
33. Discard supplies, remove gloves, and perform hand hygiene.
34. Document the procedure in the patient’s record.

REFERENCE

- http://point-of-care.elsevierperformancemanager.com/#/skills/430/quick-sheet?skillId=GN_43_12
- Adapted from Perry, A.G., Potter, P.A., Ostendorf, W.R. (Eds.). (2018). *Clinical nursing skills & techniques* (9th ed.). St. Louis: Elsevier.

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