

ASSESSMENT & PREPARATION

Glucometer

Glucometers provide a rapid approximate measurement of whole blood glucose to help direct treatment

USE FOR

- Initial assessment of all infants admitted to the neonatal unit
- Directing ongoing management for patients

STANDARD OF CARE

Glucose levels in all newborn patients should not fall below **2.5 mmol/L (45 mg/dL)**

To calculate mmol/L from mg/dL: $\text{mmol/L} = \text{mg/dL} / 18$

To calculate mg/dL from mmol/L: $\text{mg/dL} = 18 \times \text{mmol/L}$



1 COLLECT ALL MATERIALS

- glucometer
- lancets
- glucometer strips
- alcohol
- cotton swabs



2 PREPARE DEVICE

Turn on device by pressing power button or inserting a glucometer strip into the port until you feel a "click"



3 PREPARE PATIENT

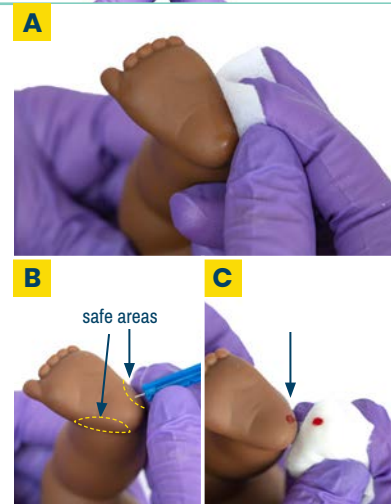
Follow hand washing protocol and put on gloves

Manage patient's pain

A Clean skin on the outer edge of the patient's heel using alcohol

B When dry, prick foot on safe areas as indicated

C Wipe away first drop of blood



4 CHECK GLUCOSE LEVEL

Collect second blood drop on tip of the glucometer strip

Read and record glucose level

Treat according to ward protocol if glucose is less than 2.5 mmol/L



5 CONCLUDE ASSESSMENT

Using a dry cotton swab, apply pressure to the heel to stop the bleeding



? COMPLICATIONS

- Bruising
- Pain
- Bleeding
- Infection
- Nerve or bone damage
- False readings

- Ensure the glucometer is accurate for neonatal blood glucose range
- Blood glucose samples should never be taken from the finger of a neonate

! DISINFECTION & INFECTION PREVENTION

- Clean hands with soap and water or alcohol before and after handling glucometer materials that will be used on patients
- Always wipe the glucometer with 70% alcohol between patients
- Dispose of strip in hazardous waste container
- Dispose of used lancet in sharps container
- Refer to the General Infection Prevention Module

REPAIR & MAINTENANCE

Glucometer

Glucometer and strips should be **stored in a clean, dry, and secure area**. Keep strips container tightly closed when not in use.

Care should be taken to ensure that glucometers and strips **remain in the ward** and are **accessible for use when required**.



⚙️ DAILY MAINTENANCE

Wipe the glucometer with alcohol using gauze or a cotton swab before first use and between patients.

Do not submerge **device** or drip 70% alcohol onto glucometer strip reading slot.

⚙️ PREVENTIVE MAINTENANCE

Perform calibration OR a quality control test on glucometers with control solution **every week** or when changing glucometer strip containers to ensure consistent results

If the glucometer is **not turning on**

Try inserting a glucometer strip until you feel a “click”



If the glucometer is **still not turning on**

Replace the batteries



If the glucometer is providing results consistently **incompatible with the patients' conditions**

Check the expiration date of your glucometer strips. If the strips are expired, try using **non-expired strips**

If results are still inconsistent perform a **quality control test** using control solution



1) Allow the strip to absorb a drop of the control solution

2) Compare results to QC results range

! CONTACT A TECHNICIAN OR MAINTENANCE DEPARTMENT IF DEVICE CONTINUES TO NOT WORK PROPERLY AFTER ADDRESSING THE COMMON ISSUES !