

St George Hospital, Renal Department – INTERNAL ONLY

Blood glucose levels during hemodialysis

Please see St George CLBRs

Blood glucose monitoring using the Accu-Chek Meter

Diabetes – Management of hypoglycaemia (hypo) in adult patients.

Objectives:

1. To ensure blood glucose levels of dialysis patients with diabetes remain stable during haemodialysis;
2. To obtain accurate blood glucose results and initiate appropriate action for an abnormal BGL.

PROCEDURE:

Preferred timing of Blood Glucose Levels:

1. An individual approach to each patient with diabetes is preferred, however, there is normally only one BGL round performed per shift
2. Suggested times for the am shift: 0830 – 0930 (before morning tea is served)
Suggested times for the pm shift: 1700 – 1730 (approx 2 hours post afternoon tea)
3. BGLs should be taken either
 - a) before the patient has eaten or
 - b) approximately 2 hours after food or
 - c) as clinically indicated
4. Check whether the patient has had their regular insulin and/or OHAs (oral hypoglycaemic agents) at the required time and when they last ate. It may be appropriate to do an individual blood glucose level prior to dialysis to ensure an episode of hypoglycaemia does not occur soon after connecting the patient to the machine.
5. Patients on insulin and/or OHAs need to ensure they eat 2 ½ to 3 hourly and to bring in food from home if they are due to eat prior to when morning or afternoon tea is served
6. If the patient has eaten just prior to the BGL round the reading will be inaccurate and should be checked after 2 hours

Set up for taking BGLs from the dialysis line during a haemodialysis treatment:

Refer to CLBR: Blood glucose monitoring using the Accu-Chek Meter

1. Choose a trolley with sharps bin attached, a blue sheet to cover work area and the *Accu-Chek Meter* box and check meter workstation is stocked with 1ml syringes, sub-cut needles and alco-wipes;
2. Conduct the daily quality control test on the meter, as per CLBR on the am shift;
3. Don single use gloves and protective eyewear;
4. Follow instructions for performing BGLs with the meter as per CLBR;
5. Obtain the sample of blood (3.5 UL) from the arterial (red) port on the dialysis line by using a 1ml syringe and sub-cut needle attached;
6. Change gloves and perform hand hygiene between patients.

BGL results and actions to follow:

1. Record the patient's BGL result and the time it was taken on the daily dialysis work sheet and if the patient is an inpatient record the result on their Blood Glucose Record chart as well
2. If result is abnormal, initiate appropriate action and document actions taken in the clinical progress notes

a) Levels less than 4 mmols:

Refer to CLBR: Diabetes – Management of hypoglycaemia (hypo) in adult patients.

b) Level 4 to 8 mmols:

- Result normal, no action required

c) Levels above 8 mmols:

- 8 to 10 mmols:
 - no action is taken
 - check if patient has recently eaten to identify a possible cause
- >10 mmols:
 - Repeat BGL in 15-20 mins, ensuring level is falling and not rising
 - if levels remain consistently higher than 10 mmols, a review of the patient's diabetes management may be required
 - possible referral to the Diabetes Educator and/or GP for review of insulin and/or OHA regime