Newborn hypoglycaemia: management

**Newborn hypoglycaemia: BGL < 2.6**

- **BGL < 1.5 or unrecordable**
  - **Do not delay treatment**
    - Notify paediatric/medical staff
    - Confirm BGL < 2 with ABG machine or laboratory
    - Admit to neonatal unit
    - Consider diagnostic samples (e.g. hypoglycaemia screen)
  - Urgent treatment with IVT
    - 10% Glucose at 60 mL/kg/day (4.2 mg/kg/min) or as per age appropriate rate
    - Consider a 2 mL/kg bolus of 10% Glucose, if administered:
      - Increase back-ground IVT rate or concentration
  - **Commence IVT**, if not already infusing:
    - 10% Glucose at 60 mL/kg/day (4.2 mg/kg/min) or as per age appropriate rate
    - IM Glucagon (200 microgram/kg) if IV access delayed
  - Next BGL after 30 minutes
  - As required:
    - Increase IV Glucose to 12 to 14 to 16 to 18%
    - > 12% Glucose infusions should be delivered by CVL/UVC
    - Increase IVT rate to 80 to 100 to 120 mL/kg/day
      - Risk of fluid overload (increase concentration rather than volume)
      - Max of 100 mL/kg/day on day 1 of life
    - BGL 30 minutes after IVT changes
    - Always calculate infused IV Glucose in mg/kg/min
    - BGL hourly until ≥ 2.6
    - Then 4-6 hourly
    - Continue feeds if not contraindicated

- **Glucose > 10 mg/kg/min?**
  - **Yes**
    - Refer to Level 6 neonatologist/paediatrician through RSQ
    - Ensure paediatric endocrinology consult
    - Collect diagnostic samples (e.g. hypoglycaemia screen), if not collected already
    - Consider pharmacological intervention in order of preference:
      - Glucagon: 10-20 microgram/kg/hour IV infusion
      - Hydrocortisone: 1-2 mg/kg/6 hourly IV or oral
      - Diazoxide: initial dose 5 mg/kg/dose bd oral
      - Octreotide: 2-5 micrograms/kg 6-8 hourly subcutaneous
  - **No**

- **BGL increased or is > 2?**
  - **Yes**
    - Feed immediately:
      - Give additional EBM (if available)/formula
      - Consider 0.5 mL/kg of Glucose Gel 40% prior to feed (if baby ≥ 35 weeks, able to swallow, well, conscious and not in intensive care nursery)
        - Maximum of 2 doses
        - Guide 60 mL/kg/day, i.e. 7.5 mL/kg/3 hours
        - If not enterally feeding proceed to **Commence IVT** box
      - Confirm BGL < 2 with ABG machine or laboratory
      - Notify paediatric/medical staff
      - BGL in 30-60 minutes (30 minutes after Glucose Gel)
  - **No**

*All BGL measurements in mmol/L*

---

**Discharge and follow-up**

- As per underlying cause
- Discuss with paediatrician/neonatologist
  - May require long term follow-up
- Ensure BGL ≥ 2.6 for 3 consecutive normal feeds prior to discharge