

Screening and Management of Asymptomatic Newborns at Risk for Hypoglycemia During First 48 Hours of Life

- **“AT RISK NEWBORNS”**: SGA, LGA, IDM, Late PT (34^{0/7} to 36^{6/7} GA at birth), other clinical situations per physician discretion
- Screening is based on **bedside glucose (BG)**. Whole blood glucose is typically 10-18% lower than plasma glucose
- Throughout this guideline, “feed” refers to maternal preference. Breast feeding alone is considered sufficient if this is mother’s choice.
- **Assess for symptoms before every BG measurement** and document in medical record.
 - Symptoms include poor feeding, jitteriness, tremors, floppiness, lethargy, high pitched cry, irritability, grunting, cyanosis, and apnea
 - Contact Neonatal Provider immediately for symptomatic infants and administer **one dose of Oral glucose Gel (OGG)**
- **40% OGG dose: 0.5ml/kg (see dosing chart)** →

Birth Weight	OGG ml to administer
≤ 2 kg	1 mL
> 2 - 2.5 kg	1.25 mL
> 2.5 - 3 kg	1.5 mL
> 3 - 3.5 kg	1.75 mL
> 3.5 - 4 kg	2 mL
> 4 - 4.5 kg	2.25 mL
> 4.5 - 5 kg	2.5 mL

Begin feeding within 60 min of birth

BG screen #1 at 30 min after completion of first feed

- If ≥ 35 mg/dL: continue feeds q2-3 hrs and perform pre-feed BG screen
- If < 35 mg/dL:
 - Administer OGG immediately
 - Place skin-to-skin and feed
 - Repeat BG 1 hour after OGG dose (not 1 hour after feed)

BG screen #2: Target ≥ 35 mg/dL (birth - 4 hrs), ≥ 45 mg/dL (4 - 24 hrs)

- If ≥ Target continue feeds q2-3 hrs and perform pre-feed BG screen
- If < 25 mg/dL: Notify Neonatal provider and administer OGG
- If 25 to <Target:
 - Administer OGG immediately
 - Place skin-to-skin and feed
 - Repeat BG 1 hour after OGG dose

Continue feeds q2-3 hrs with BG screens prior to feeds:

- If >Target: continue feeds q2-3 hrs and perform pre-feed BG screen
- If <Target: administer OGG, place skin-to-skin and repeat BG in 1 hour

Target Glucose levels:

- ≥ 35 mg/dL from birth to 4 hrs
- ≥ 45 mg/dL from 4 to 24 hrs
- ≥ 50 mg/dL from 24 to 48 hrs

BG = 35-44 mg/dL between 4 and 24 hours of age

- Administer OGG immediately
- Place skin-to-skin and feed
- Repeat BG 1 hour after OGG dose
- Notify Neonatal Provider if > 24 hours of age

BG > 45 mg/dL between 4 and 24 hrs of life

- OGG dose not needed
- Continue feeds q2-3 hrs and perform pre-feed BG screen

Notify Neonatal Provider and give OGG immediately if:

- Infant is symptomatic
- Infant requires **total THREE doses OGG since birth**
- BG below the notification threshold (below):
 - < 25 mg/dL at any time after the first OGG dose
 - < 35 mg/dL for greater than 4-24 hrs of age
 - < 50 mg/dL at 24-48 hrs of age



STOP WHEN:

4 consecutive values (including post gel screen) in target range for age in hrs:

- Birth - 4 hrs ≥ 35 mg/dL
- > 4 - 24 hrs ≥ 45 mg/dL
- >24 - 48 hrs ≥ 50 mg/dL

This guideline provides reasonable thresholds for intervention, given the lack of consensus regarding the actual definition of neonatal hypoglycemia, particularly during the first 24 hours of life

Created by	Department	Creation Date	Version Date
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