# Hyperinsulinism (HI) quick guide for term and term equivalent babies



Birth -> 120h	≥120h	Day 7 ->
In suspected HI maintain BG ≥3mmol/L		
Keep milk going as 3hrly boluses for metabolic transition	If ongoing high GIR	If high GIR ongoing, consider moving to 20% glucose
Test of weaning by 1mg/kg/min	raise threshold to ≥3.5mmol/L	or greater to promote milk
If weaning failure consider raising threshold to 3.5mmol/L	Use Accu-Chek®	Discuss with Endocrine
If BG <3mmol/L perform hypo screen and treat with glucogel		
Resolution occurs, no further testing or follow-up needed  HI not yet resolved, keep BG testing, will need safety fast		

### **Definitions**

Suspected HI	Resolution of HI
Intravenous GIR of ≥8mg/kg/min to maintain	Maintenance of BG ≥3mmol/L throughout test
normoglycaemia	of weaning and GIR <8mg/kg/min
	or
*Need biochemical confirmation*	Maintenance of BG ≥3.5mmol/L for 24h on
	3-hourly feeds of standard milk

#### How to calculate GIR?

Intravenous glucose infusion rate (GIR) in mg/kg/min =

[ Total daily volume of IV glucose (ml/kg/d) x concentration of glucose (%) ] / 144

## When to measure blood glucose (BG)? (also see BG maps)

15-30mins after low BG Pre-feed (3hrly or 4hrly)

#### When to wean IV fluids by 1mg/kg/min? (also see BG maps)

1 x BG >3mmol/L during test of weaning in first 5d or 1 BG ≥3.5mmol/L if older

If hypoglycaemia <3mmol/L occurs, promptly perform a hypo screen and treat with glucogel as first line management, even if on IV fluids.

### Managing BG < 3.5mmol/L after day 5 (also see BG maps)

Tolerate once - we expect the BG to rise as baby adapts. Recheck BG pre-feed in 3h If a second consecutive BG is < 3.5mmol/L (and ≥1mmol/L, and there are no neuro concerns) give 0.5ml/kg of 40% glucogel buccally, plus the feed which is due. Recheck BG in 15-30mins If a third consecutive hypoglycaemic episode occurs, give a second glucogel and increase the continuous IV GIR by 1 mg/kg/min. Recheck BG in 15-30 mins

On the **fourth consecutive occasion or if BG <1mmol/L, or** neurological dysfunction at any BG, give a 2.5ml/kg bolus of 10% glucose and increase the GIR by 2mg/kg/min. Recheck BG in 15-30mins

# Preparing for discharge checklist for babies who did not resolve in the first week of life

Check diagnosis has been confirmed biochemically

Check fatty acids result normal (cannot fast if not)

Perform 6h fast and keep BG stable ≥3.5mmol/L for >48h

Review home BG testing schedule

Train parents in BG testing and perform glucogel demonstration

Give home hypo plan, and feed/BG diary to parents

Plan follow-up and create Trak alert (as needed)

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