

Treatment of hypoglycaemia in patients with diabetes

Indications: Blood glucose (BG) less than 4.0mmol/L **irrespective** of symptoms.

Adults (including diabetes in pregnancy): on insulin and/or sulfonylurea as per protocol below.

Paediatric: on insulin as per protocol below, consultation with paediatrician once patient stabilised.

A	<p>Safe to swallow (ie awake and co-operative)</p> <p>If on intravenous (IV) insulin infusion, suspend immediately.</p> <p>If using insulin pump, only disconnect if BG less than 2.0mmol/L.</p>	<p>Unconscious or unsafe to swallow</p> <ul style="list-style-type: none"> Position patient on their side. If on intravenous (IV) insulin infusion - suspend immediately. If using an insulin pump – disconnect immediately. Notify doctor on call immediately (ie CODE BLUE). If no local doctor available call MedSTAR. <p>Adults – Give 1mg glucagon IM (as per CHSA standing order, once only).</p> <ul style="list-style-type: none"> If no response to glucagon within 10 minutes, the doctor may then order: 20 - 30ml IV / IO# 50% Glucose in 50ml (slow push - 3ml/min). Followed by 5 - 10% Glucose infusion to maintain BG 5.0 - 10.0mmol/L.
<p>GO TO B</p> <p>↓</p>		<p>Child under 25kg Give 0.5mg glucagon IM (as per CHSA standing order, once only).</p> <p>Infant/child/adolescent IV / IO# 10% Glucose in 100ml, 2ml/kg over 2 minutes. Followed by 5 - 10% Glucose infusion to maintain BG 5.0 - 10.0mmol/L.</p> <p>When conscious and safe to swallow GO TO B</p> <p>Commence maintenance IV glucose for prolonged hypoglycaemia and/or prevention of repeat episodes in high risk patients.</p> <p>↓</p>
B	<p>Give 15gm of fast acting carbohydrate. <i>For children, use 0.3gm of fast acting carbohydrate per kg of body weight, up to a maximum dose of 15gm.</i></p> <p>Hypo Kit: 60ml GTT 75® glucose drink (75gm per 300ml) <i>(See below for alternative options)*</i></p> <p style="text-align: center;">GO TO C</p> <p>↓</p>	
C	<ul style="list-style-type: none"> Repeat BG 10 - 15 minutes after treatment. If BG is less than 4.0mmol/L OR patient still has symptoms and is assessed as:- <ul style="list-style-type: none"> safe to swallow – GO TO B if BG remains <4.0mmol/L after 45 minutes or 3 oral cycles, NOTIFY DOCTOR. if unsafe to swallow – GO TO A When BG is 4.0mmol/L or above AND symptoms are no longer present, give 15gm slow acting carbohydrate. Hypo Kit: 2 x sweet biscuit eg Arnotts 2 pack <i>(See below for alternative options)*</i> Recheck BG in 30 mins. <p style="text-align: center;">GO TO D</p> <p>↓</p>	
D	<ul style="list-style-type: none"> If BG remains above 4.0mmol/L, resume QID BG monitoring and include 0200 for first 24hrs. [▲] If the Doctor was not notified, do so at appropriate time so diabetes treatment can be reviewed. <ul style="list-style-type: none"> Recommence insulin infusion/reconnect insulin pump as per medical instructions (in type 1 diabetes, do not suspend / withhold insulin for more than 1 hour). Investigate cause. Review carbohydrate intake. May need adjustment of insulin/diabetes medication. <ul style="list-style-type: none"> Continue to administer insulin as prescribed, withholding the next insulin dose may result in hyperglycaemia. Contact prescriber for dose adjustment advice. Beware of recurrent hypoglycaemia - resume QID BG monitoring and include 0200 for first 24hrs. [▲] 	

***Alternatives for Hypo Kit**

Fast acting carbohydrate

- 100ml GTT 50® glucose drink (50gm carbohydrate in 300ml) **OR**
- 90ml Lucozade (15gm equivalent).

Slow acting carbohydrate

- 2 plain Milk Coffee, Arrowroot or similar **OR**
- 6 Jatz crackers.

Important points – observe pulse and BP with event

- Ensure maintenance IV glucose and/or adequate carbohydrate with meals to replenish the liver glucose stores.
- # Intraosseous route (IO) should only be used by staff who are trained and have achieved clinical competency.
- [▲]If hypo was severe (eg BGL less than 2.0mmol/L, unconscious or assessed as unsafe to swallow) or prolonged (greater than 45mins) the patient should have hourly BG until medical review.
- Restock the Hypo Kit – discard all opened items.