

Treatment of Hyperglycaemia with individualized subcutaneous insulin corrections

SAFETY PRECAUTIONS

1. **AIM:** Aim to reduce blood glucose (BG) values to below 10 mmol/l with a lower threshold of 6 mmol/l.
2. **INSULIN TYPE:** Standard corrections done with regular short-acting insulin (yellow-coded, e.g. Actrapid®); Use rapid-acting analogues (e.g. Humalog®) only in patients who already use rapid-acting analogues at home.
3. **ROUTE:** Subcutaneously in abdominal area for faster absorption; avoid areas of lipohypertrophy.
4. **TIMING:** The correct timing of subcutaneous insulin corrections is important to avoid the overlap of insulin action and subsequent risk of iatrogenic hypoglycaemia.
 - **If eating regular meals** corrections are given before meals (NOT after meals, NOT before snacks & NOT during the night) for both yellow-coded insulin (30 min before meals) and rapid-acting insulin analogues (just before meals)
 - **If NPO or on tube feeds** corrections using yellow-coded insulin are given 6-hourly; rapid-acting insulin analogues are given 4-hourly.
5. **CLEAR DOCUMENTATION:** The 'add-on' dose should be clearly recorded in red pen to correspond with the relevant pre-meal blood glucose on the BG-profile (e.g. 12.3 mmol/l +2).
6. **MONITOR BLOOD KETONES:** When BG ≥ 14 mmol/l or when indicated (e.g. presence of vomiting and poor food intake) check capillary blood ketones using the Freestyle® glucose meter with ketone-strips and discuss further management with the responsible consultant.
7. **CHOOSING A TABLE:** The doctor selects the appropriate table (Low Dose / Moderate / BMZ (Betamethasone) Corrections) based on indications as noted below:

Table 1: Low dose corrections

- 1st line in those who are insulin naïve, T1D & slender, HbA1c < 6.5%
- High risk for hypoglycemia (e.g. in the first trimester of pregnancy, frail, renal failure.)

Table 2: Moderate corrections

- 1st line in those who are more insulin resistant (obesity, covid19, on oral steroids, uncontrolled diabetes)
- Table 1 failed to control BG

Table 3: BMZ corrections

- 1st line in those on Betamethasone
- Table 2 failed to control BG

**Table 1
Low Dose Corrections**

BG before meals	Bolus Insulin
≥ 10 mmol/l	2 units
≥ 14 mmol/l*	4 units
If BG values remain ≥ 10 mmol/L move to Table 2	

**Table 2
Moderate Corrections**

BG before meals	Bolus Insulin
≥ 10 mmol/l	2 units
≥ 12 mmol/l	4 units
≥ 14 mmol/l*	6 units
If BG values remain ≥ 10 mmol/L move to Table 3	

**Table 3
BMZ Corrections**

BG before meals	Bolus Insulin
≥ 8 mmol/l	2 units
≥ 10 mmol/l	4 units
≥ 12 mmol/l	6 units
≥ 14 mmol/l*	8 units

*Follow step 6 of the safety precautions



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