

Adult Insulin Infusion Protocol for Type 2 Diabetes Mellitus Or Hyperglycemia (Not for use in diabetic ketoacidosis or obstetric patients)

Attention:

- No IV boluses in renal failure (race corrected eGFR < 30 ml/min)
- In Type 1 Diabetes Mellitus, use Type 1 Diabetes Adult Custom Insulin Infusion Protocol.
- All actions listed below must be performed within 15 minutes of obtaining BG.

To initiate insulin infusion

Table #1 Insulin Infusion Initiation

BG (mg/dL)	110 – 150	151 – 180	181 – 220	221 – 260	261 – 300	> 300
Initial Infusion Rate (units/hour)	1	2	2.5	3	3.5	4.5

- Check BG hourly at initiation and when changing doses of vasopressors, steroids and nutrition (TPN, PPN, tube feeds, or if patient becomes NPO).
- Reduce checks to every 2 hours when BG is 110-150 x 3 consecutive hours and changing < 50 mg/dL/hr.

To titrate insulin infusion

Table #2 Standard Insulin Infusion Titration

BG mg/dL	Standard Insulin Infusion (units per hour) - Regular insulin at concentration of 1 unit/mL.
<70	Hold infusion; give 25 ml of 50% dextrose IV push. Re-check BG in 15 minutes until BG >70 mg/dL, then hourly. Call provider if BG <70 mg/dL x 3 consecutive measurements. When BG > 150 mg/dL restart infusion at 50% of the last rate.
70 - 89	Hold infusion. Recheck BG every hour x 2, every 2 hours x 2, then every 4 hours. When BG > 150 mg/dL restart infusion at 50% of last rate.
90 - 109	Decrease infusion by 50% of last rate. Re-check BG in 1 hour.
110-150 Target 120 mg/dL	If BG REDUCED BY > 20 mg/dL, then decrease rate by 50%, otherwise NO CHANGE, recheck in 1 hour When BG between 110-150 x 3 consecutive hours and changing < 50 mg/dL per hour, then reduce checks to every 2 hours.
151 – 170	Increase by 0.5 unit/hour unless BG reduced by > 50 mg/dL since last test, then decrease rate by 1unit/hour. Re-check in 1 hour.
171 - 200	Increase by 1 unit/hour unless BG reduced by > 50 mg/dL since last test, then decrease rate by 1unit/hour. Re-check in 1 hour.
201 - 240	Increase by 1.5 units/hour unless BG reduced by > 50 mg/dL since last test, then decrease rate by 1unit/hour. Re-check in 1 hour.
241 –280	Increase by 2 units/hour unless BG reduced by > 50 mg/dL since last test, then decrease rate by 1unit/hour. Re-check in 1 hour.
281 - 320	Increase by 2.5 units/hour unless BG reduced by >50 mg/dL since last test, then decrease rate by 1 unit/hour. Re-check in 1 hour.
321 - 360	Increase by 3 units/hour unless BG reduced by >50 mg/dL since last test, then decrease rate by 1 unit/hour. Re-check in 1 hour.
> 360	Increase rate by 4 units/hour. Re-check in 1 hour. Contact provider for possible bolus dose.

Subcutaneous Meal Insulin

Table #3 -Subcutaneous Humalog (lispro insulin) Meal Coverage (in addition to insulin infusion, and based on current drip rate) when patient starts eating (includes liquids containing sugar (soda, juice, jello, popsicles and lemon ice).

Inject Humalog (lispro insulin) subcutaneously within 15 min after patient finishes eating.

Drip Rate (units/hr)	Ate >50% meal (units)	Ate <50% meal (units)	Custom
0-0.5	2	0	
0.6-2	4	2	
2.1-4	6	3	
4.1-6	8	4	
6.1-8	10	5	
>8	12	6	

To discontinue insulin Infusion protocol: Administer prescribed dose of long acting subcutaneous insulin at least 2 hours before stopping infusion