

Insulin Pump failure or vacation guide for calculating insulin doses

You will need to take rapid acting insulin a minimum of every 4 hours around the clock to prevent rapid onset of Diabetic Ketoacidosis (DKA).

Keep a copy of your insulin pump settings & your online sign on information for uploading your pump. Be familiar with your insulin needs on a daily basis.

Basal (Background)

You will need to replace your basal insulin in one of 2 ways;

1. take long acting insulin such as Basaglar or Tresiba = to your total daily basal once daily
OR
2. take rapid acting insulin = to $1/6^{\text{th}}$ of your total daily basal every 4 hours until you get back to pumping. *(If pump will be off for more than 24 hours, long acting insulin as above is advised.)*

Bolus (Doses)

Calculating doses of insulin is tricky after relying the pump calculator. The following is a simplified approach; the actual calculations are on the back of this page.

Small kids or very insulin sensitive people will need a personal plan or use the calculations on the back of this page.

Simplified approach for average teens or adults:

Aim for a carb target at meals (example 60 - 75g)

Bolus replacement

INSULIN DOSING GUIDE

AT EACH MEAL	BLOOD SUGAR	RAPID INSULIN DOSE
	less than 4mmol/L	treat low, recheck in 15 min., then give insulin according to recheck value
	4 – 7.9	5 (food ~ 60-75 g carb)
	8 – 8.9	5.5
	9 – 9.9	6
	10 – 10.9	6.5
	11 – 11.9	7

PLUS

Basal replacement	Long acting INSULIN ____ UNITS ONCE DAILY	OR	1/6 of Total Daily Basal as rapid
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Bolus Calculations:

Meal insulin

$\frac{\text{g of carb eaten}}{\text{carb ratio}} = \text{meal dose (U)}$ example:

$$\frac{55\text{g}}{12 \text{ g/U}} = 4.6 \text{ U}$$

Correctional insulin

$\frac{(\text{Current BG} - \text{Target BG})}{\text{Insulin Sensitivity factor}} = \text{correction dose (U)}$
example:

$$\frac{(12.6 - 6.0 \text{ mmol/L})}{2.8 \text{ mmol/L /U}} = \frac{6.6}{2.8} = 2.3 \text{ U}$$

Total dose of insulin

Meal insulin + correctional insulin = total dose

example:

$$4.6 \text{ U} + 2.3 \text{ U} = 6.9 \text{ Units}$$

(you may take 6.5 or 7 Units)

Notes:

- **Remember add your basal replacement if using 1/6 total daily basal as rapid acting insulin OR your once daily dose of long acting insulin in addition to rapid doses.**
- **You will also need to consider your activity level and the time since you last took rapid acting insulin when you decide on your final dose.**
- **Parents of children, remember there is a Pediatrician on-call 24 hrs/day to help.**