



PERSONAL PUMP SETTINGS EVALUATIONS

Name: _____ Date _____

As you begin pump therapy, avoiding low blood sugar reactions takes priority over extremely tight control. However, as you become more comfortable with your insulin pump, you will probably need to adjust some of your settings. We want you to have the tools necessary to adjust your own settings so we have included the guidelines that we use. If you ever have any questions about your settings, please feel free to contact us to discuss them.

Tip: Always make sure you see similar results at least twice before adjusting any of your settings. There will always be days that just don't make sense but these are not the days to base your setting changes on. Instead, use your temporary adjustments for those days (ex: Temporary basal rate).

Basal Rates

Basal Rate: Insulin that is continuously delivered over a 24 hour period. Correct basal rates should keep your blood glucose levels from fluctuating more than about 30-40 points during the day without food, illness, extra stress, and activity.

TIME	12AM								TOTAL/24 hours
Units/Hour									

Guidelines for evaluations:

- ✓ Your first evaluation should be your overnight basal rate since your AM glucose result reflects this rate and can affect the rest of your day.
- ✓ Start any evaluation with a blood glucose (BG) level in near normal range (100-150).
- ✓ During your evaluation you should participate in normal activities for you. However, avoid extra activity, drinking alcohol, and eating high-fat meals since these activities can compromise the results.
- ✓ Only do one evaluation per day in order to avoid missing too many meals.
- ✓ **Stop the test and treat if your blood sugar drops below 70 or rises above 240. Begin the evaluation again on another day when your BG is near-normal.**



Time Frames and Directions	BG Testing Times	How to Evaluate
Overnight: 1. Eat an early dinner and take regular meal bolus 2. Eat no snacks 3. Begin eval at bedtime	4-5 hrs after dinner bolus Bedtime Midnight 2-3AM Upon Waking	If BG increases more than 30-40 points adjust your basal rate up 0.10 – 0.20 u/hr If BG decreases more than 30-40 points adjust your basal rate down 0.10 – 0.20 u/hr.
Breakfast/Morning: 1. Start with waking BG between 100-150mg/dL 2. Skip Breakfast and eat no food until lunch	Every 1-2 hours upon waking until lunch	Same as above
Lunch/Mid-Day: 1. Start with pre-lunch BG between 100-150mg/dL 2. Skip lunch and eat no food until dinner	Every 1-2 hours until dinner	Same as above
Dinner/Evening: 1. Start with pre-dinner BG between 100-150mg/dL 2. Skip dinner 3. Ok to eat a bedtime snack or a late dinner	Every 1-2 hours until late snack or late dinner	Same as above



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Insulin to Carb Ratios

Insulin to Carb Ratio (I:C): How many grams of carbs one (1) unit of insulin covers . Your ratio will help you determine how much insulin (food bolus) to take for your meals and snacks.

My Post-meal BG target is _____.

My Insulin to Carb Ratio(s):

TIME	12AM			
Grams				

How to Calculate Insulin Dosage:

$\frac{\text{Total grams of carbs}}{\text{I:C}} = \text{Units of Insulin (bolus)}$
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For Example:

You eat 45 grams of carbs and your I:C ratio is 15

So: $\frac{45g}{15} = 3$ Units of insulin

How to Evaluate:

1. Start with a pre-meal BG close to normal range 80-150
2. Eat a meal lower in fat and make sure you can record an exact number of carbs eaten.
3. Test and record your BG levels 2, 3, and 4 hours after the meal.
4. **If your BG is > 30-40 pts above your *post-meal* target, decrease your I:C ratio by one (1) number.**
5. **If your BG is < than your *pre-meal* target, increase your 1:C ratio by one (1) number.**
6. **If your BG stays within your post-meal target range, your I:C ratio is correct.**

Tip: It is not uncommon to have different insulin-to-carb ratios for different times of the day, so make sure you test each meal-time at some point. If you make adjustments, re-evaluate the new settings.

Correction Factors

Correction (insulin sensitivity) factor: How much insulin I take to correct a high blood glucose level. One unit of insulin will drop my blood glucose level how many numbers (in mg/dL).

My Sensitivity factor(s):

TIME	12AM			
Units				

How to Evaluate:

1. Start with a BG level that is above your target (make sure it is at least 3-5 hours since your last meal or bolus and when you can wait another 4-5 hours to eat).
2. Take insulin (correction bolus) using your current factor (use your pump recommendation).
3. Test and record your BG levels every 1-2 hours for 4-5 hours. After 4-5 hours:
4. **If your BG is > 30-40 points *above* target *decrease* your factor by 5 points at a time.**
5. **If your BG is > 30-40 points *below* target after 4 hours, *increase* your factor by 5 points.**
6. **If your BG is within 30-40 points of your target, your correction factor is correct.**

Tip: It is not uncommon to have different correction factors for different times of the day, so make sure you test different periods of time separately. If you make adjustments, re-evaluate the new setting.