

BASAL RATE TESTING

Basal insulin controls your blood glucose overnight and between meals. The goal is to set basal rates that will help keep your blood glucose stable without the need for extra food or insulin. You will find that periodically, your basal insulin will need to be fine-tuned, and segments may need to be added or deleted to obtain optimal blood glucose control.

To evaluate your basal rates, you will need to check blood glucose levels frequently while eliminating other factors that may affect blood glucose.

General Guidelines for Evaluating Basal Rates

- ❖ Divide the day into 4 time frames and evaluate one at a time on different days: overnight, breakfast, lunch, and dinner. Begin with the overnight basal evaluation.
- ❖ During the day of a basal rate evaluation avoid exercise and alcohol.
- ❖ Your last meal, prior to the evaluation should be one for which the food bolus can be easily and accurately determined. Choose low-fat foods for this meal. Eat no food during the basal evaluation time period.
- ❖ Basal rate evaluations can begin 4-5 hours after the last bolus dose was taken.
- ❖ Blood glucose should be between ~5-8 mmol/l at the beginning of the evaluation in order to proceed.
- ❖ Stop the evaluation if your blood glucose values go above or below your target range. Treat any low or high blood glucose as usual.
- ❖ During a basal rate evaluation, generally blood glucose levels should be checked every 1-2 hours. For the overnight time frame, blood glucose should be checked before bedtime, midnight, 2-3am and upon waking.
- ❖ Do not plan a basal rate evaluation during illness, unusual stress, or after a severe low blood glucose reaction.
- ❖ Keep detailed records so your physician and/or diabetes educator can help you to evaluate the information and assess your basal rates.
- ❖ Basal rates are correct if BG does not increase or decrease more than 1.5-2.0 mmol/l during evaluation.



Time Frames and Directions	When to Test Glucose	Evaluating Your Results
<p>Overnight</p> <ul style="list-style-type: none"> ➤ Eat an early dinner <p>Don't forget your meal bolus</p> <ul style="list-style-type: none"> ➤ No food afterwards ➤ Begin evaluation at bedtime if BG is between 5-8mmol/l 	<ul style="list-style-type: none"> ❁ 4 hours after dinner bolus ❁ Bedtime ❁ Midnight ❁ 2-3 am ❁ Upon waking 	<p><u>If BG increases:</u> Your basal rate needs to be increased for this time frame.</p> <p><u>If BG decreases:</u> your basal rate needs to be decreased for this time frame.</p>
<p>Breakfast-time</p> <ul style="list-style-type: none"> ➤ Skip breakfast ➤ No food until lunch ➤ Begin evaluation if BG is between 5-8mmol/l 	<ul style="list-style-type: none"> ❁ Every 1-2 hours upon waking until lunch 	Same as above.
<p>Lunch-time</p> <ul style="list-style-type: none"> ➤ Skip lunch ➤ No food until dinner ➤ Begin evaluation if BG is between 5-8mmol/l 	<ul style="list-style-type: none"> ❁ 4 hours after breakfast ❁ Every 1-2 hours until dinner 	Same as above.
<p>Dinner-time</p> <ul style="list-style-type: none"> ➤ Skip dinner ➤ Begin evaluation if BG is between 5-8mmol/l ➤ Have a bedtime snack, and end the evaluation then if desired 	<ul style="list-style-type: none"> ❁ 4 hours after lunch ❁ Every 1-2 hours until dinner or snack 	Same as above.

Guidelines for Adjusting Basal Rates

- ❁ Use the information obtained from the basal rate evaluations to fine-tune basal rates.
- ❁ Fluctuations of more than 1.5-2mmol/l during a basal evaluation, indicates the need to adjust basal rates.
- ❁ It is best to see a repeating trend before making a basal change.
- ❁ Make small changes, typically .05 to 0.1units/hour.
- ❁ The basal rate should be increased or decreased 1-2 hours before the blood glucose begins its rise or fall.
- ❁ Make one change at a time, and then re-evaluate that time frame.
- ❁ Check with your medical prior to changing basal rates.
- ❁ Remember, the goal is to find the basal rate segments that work the best most of the time. Don't expect perfection.