

# Basal rate testing

## Information for patients using insulin pumps

### Why is basal rate testing important?

- Your basal rate is the steady amount of insulin you get from the pump. Having the right basal rate keeps your blood sugars in the right range overnight and between meals.
- If your basal rate is too high, your blood sugar could go low (hypoglycemia).
- If your basal rate is too low, your blood sugar could go too high.
- Testing your basal rate can help you find the right basal rates for you.

### How do I test my basal rate?

- Decide which part of the day you want to test.
  1. Overnight
  2. Morning
  3. Afternoon
  4. Evening
- You may want to start by testing your overnight basal rate.
- Do not drink or eat while you are doing the test (including no caffeine).
- You will need to check your blood sugar frequently.
- Only start basal rate testing if your blood sugar is between 5 and 8 mmol/L.
- If your blood sugar goes too high or too low, you will need to stop the test and try again on a different day.
- Test each time period on 3 different days.

## Testing overnight

1. Eat an early dinner. After dinner, do not eat or take a bolus of insulin.
2. Start basal rate testing 4 hours after dinner.
3. Only start testing if your blood sugar is between 5 and 8 mmol/L.
4. Do not eat, drink or take a bolus of insulin until breakfast.
5. Test your blood sugar 1 to 2 times overnight, and when you wake up.

Time	4 hours after dinner	2 a.m.	4 a.m.	When you wake up
Blood sugar – Day 1				
Day 2				
Day 3				

## Testing in the morning

1. Start testing if your fasting blood sugar (when you wake up in the morning) is between 5 and 8 mmol/L.
2. Skip your breakfast.
3. Do not eat, drink, or take a bolus of insulin until lunch.

Time	When you wake up	Hour 1	Hour 2	Hour 3	Hour 4
Blood sugar – Day 1					
Day 2					
Day 3					

## Testing in the afternoon

1. Begin testing 4 hours after your breakfast. Do not eat or take a bolus of insulin after breakfast.
2. Only start basal rate testing if your blood sugar is between 5 and 8 mmol/L.
3. Skip lunch.
4. Do not eat, drink, or take a bolus of insulin until dinner.

<b>Time:</b>	<b>4 hours after breakfast</b>	<b>Hour 1</b>	<b>Hour 2</b>	<b>Hour 3</b>	<b>Hour 4</b>
<b>Blood sugar – Day 1</b>					
<b>Day 2</b>					
<b>Day 3</b>					

## Testing in the evening

1. Begin testing 4 hours after your lunch. Do not eat or take a bolus of insulin after lunch.
2. Only start basal rate testing if your blood sugar is between 5 and 8 mmol/L.
3. Skip dinner.
4. Do not eat, drink, or take a bolus of insulin until bedtime.
5. Have a snack before bedtime, if you would like.

<b>Time:</b>	<b>4 hours after lunch</b>	<b>Hour 1</b>	<b>Hour 2</b>	<b>Hour 3</b>	<b>Hour 4</b>
<b>Blood sugar – Day 1</b>					
<b>Day 2</b>					
<b>Day 3</b>					

## What do I do after testing my basal rate?

After you test a time period 3 times, you can decide if you need to make a change to your basal rate.

- If your blood sugar went up by more than 2 mmol/L during the time period, your basal rate is **too low**.
- If your blood sugar went down by more than 2 mmol/L during the time period, your basal rate is **too high**.
- If your blood sugar was stable during the time period, you do not need to make any changes.

## How do I change my basal rate?

If you think you need to change one of your basal rates, talk to your diabetes team. Together we will:

1. Look at what time your blood sugar went up or down by more than 2 mmol/L.
2. Change the basal rate **before** the increase or decrease.
3. Make small changes to your basal rate of 0.025 or 0.05 units per hour.
4. Retest the new basal rate.

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