

# How to Check My Basal Rates

## For patients with diabetes using an insulin pump

### What are basal rates?

Basal rates are the amount of hourly insulin your body needs between eating meals.

### Your basal rates may need to change:

- If your lifestyle changes
- If your weight changes
- As the seasons change
- For different times of the day

### How do I check if my basal rates are correct?

1. Choose the time that you would like to check. The overnight basal is a common one to start with.
2. Check your blood sugar at the time you start to test your basal rate.
3. Your blood sugar must be between 4 and 10 mmol/L to start. Ideally, start the test with a blood sugar between 5.6 and 8.3 mmol/L to help prevent your sugar from going too low or too high during the test.
4. Check your blood sugar every 2 to 4 hours if you do not have continuous glucose monitoring or a flash meter.

Important!

- Do NOT eat or drink carbohydrates for 4 hours before or during the test.
- Do NOT exercise before or during the test.
- Do NOT eat a high protein or high fat meal before the test.
- Do NOT take bolus insulin for a correction or carbohydrate during the test.
- Do NOT drink alcohol 24 hours before and during the test.

Your basal rate is correct if your blood sugar does not change more than 1.7 mmol/L from the previous blood sugar test.



**Stop the test if:** You have a blood sugar level higher than 12 mmol/L, or  
You have a blood sugar level below 4 mmol/L and treat the low blood sugar



### **Adjusting my basal rates:**

If your blood sugar level increases more than 1.7 mmol/L from the previous blood sugar test, your basal rate needs to increase. Increase the basal rate 2 to 3 hours before your blood sugar starts to rise.

If your blood sugar level decreases more than 1.7 mmol/L from the previous blood sugar test, your basal rate needs to decrease. Decrease the basal rate 2 to 3 hours before your blood sugar starts to fall.

### **How much of a change should there be in my basal rate?**

The amount of change in your basal rate depends on your what your basal rate is and the amount of change you saw in your blood sugar during the test period.

Here is a guide to help you decide how much of a change to make.

**If you are not sure, contact a member of your health care team.**

The change in blood sugar	Your current basal rates		
	If less than 0.4 unit an hour	If between 0.4 to 1 unit an hour	If more than 1 unit an hour
More than 1.7 mmol/L	Change the basal rate by 0.025* to 0.05 unit an hour	Change the basal rate by 0.05 to 0.1 unit an hour	Change the basal rate by 0.1 to 0.2 unit an hour

\*Note: If you are using the Omnipod insulin pump, the smallest basal rate adjustment is 0.05 unit/hour.

Adapted from Scheiner, G. Think like a pancreas: a practical guide to managing diabetes with insulin. Philadelphia: Da Capo Press; 2011

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