Quick Guide:
Matching Rapid-acting Insulin to Carbohydrate Intake

Step 1: Identify the carbs

Identify the foods in your meal that contain carbohydrates.

Step 2: Count the carbs

Count the total available carbohydrates.

See Carbohydrate Counting – Resources handout.

[carbs – (fibre + sugar alcohol) = total available carbs].

Step 3: Calculate meal bolus

Calculate how much rapid-acting insulin you need to match the total available carbs.

[total available carbs ÷ insulin to carbohydrate ratio (ICR) = units of rapid-acting insulin]

☐ My ICR is:

Breakfast:	1 unit	_____g of carbohydrate
Lunch:	1 unit	_____g of carbohydrate
Dinner:	1 unit	_____g of carbohydrate

Step 4: Check blood sugar

Check your blood sugar before you eat.

Step 5: Calculate correction bolus

Any time your pre-meal blood sugar is above your target blood sugar, you need to adjust your insulin using your **insulin sensitivity factor** (ISF).

[pre-meal blood sugar – target blood sugar = corrected blood sugar]
[corrected blood sugar ÷ ISF = correction bolus]

[(_____ mmol/L - _____ mmol/L = _____ mmol/L) ÷ _____ ISF = _____ u of _____]

☐ My target blood sugar is _____ mmol/L.

☐ My correction bolus (ISF) is 1 unit for every _____ mmol/L over my target pre-meal blood sugar.

☐ My correction scale is:

Pre-meal blood sugar	Adjust insulin by:
	0 unit
	+1 unit
	+2 units
	+3 units
	+4 units
	+5 units

Step 6: Calculate insulin dose

Now add your meal bolus and your correction bolus together.

[meal bolus units + correction bolus units = total bolus insulin dose]

Step 7: Adjust for activity

If you expect you will be more active than usual within 2 hours of injecting your bolus insulin, you might need to reduce the bolus dose by 25% to 75%, depending on the activity.

[total bolus insulin dose x _____ % = _____ u of _____]

Step 8: Inject, eat, record

Inject your bolus dose.
Your doctor or diabetes educator might advise you to inject 0 to 15 minutes before eating.
Eat your meal. Record the food eaten, the total amount of carbohydrates, and the amount of insulin you gave yourself.

Step 9: Check blood sugar

Check blood sugar 2 hours after eating to confirm that your ICR and ISF are correct.

When not using a correction bolus, your meal bolus is correct if your 2-hour post-meal blood sugar is within 3 mmol/L of your pre-meal blood sugar.

When using a correction bolus, your total insulin bolus is correct when your 2-hour post-meal blood sugar reaches your target post-meal blood sugar.

☐ My target post-meal blood sugar is _____ mmol/L.

Catalogue #262260 (February 2022)
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