Sick days and type 1 diabetes

Being sick means stress for the body, which can increase my risk of high blood sugar and of developing ketones. With infections, my insulin needs may temporarily increase and it may be more difficult to eat and drink.

On sick days, I make sure to:

- Check my blood sugar at least every 2-3 hours. Some continuous glucose monitors (CGM) may be less reliable when dehydrated (e.g., because of fever, diarrhea and vomiting) or when taking acetaminophen, salicylic acid or vitamin C supplements. On the other hand, you can rely on the trend arrows.
- Measure my ketones every two to four hours if my blood sugar remains high (over 14 mmol/L) or if I have vomiting, diarrhea or nausea.
- Continue to eat and hydrate normally. I prioritize carb-containing foods and take my rapid-acting insulin accordingly.

If I have gastrointestinal symptoms that prevent me from eating normally, I follow these three steps to prevent dehydration:

1 Liquid foods for the first 24 hours	**2** Low residue diet to allow the intestine to rest	**3** Return to a normal diet
What to take? • Easily digested fluids (e.g., water, broth, tea). • If well tolerated, quickly incorporate carbohydrate-containing fluids (e.g., juice and regular soda) or rehydration solutions (e.g., GastrolyteMC). **How often?** • 250 mL (1 cup) every hour **or** • Smaller amounts every 15 minutes	**What to take?** • Solid foods (low in fibre) to be added gradually (e.g. white bread, crackers, white rice) in order to return to a quantity of carbohydrates that is close to your habits. • Gradually add fruits, vegetables and meats according to your tolerance.	**What to take?** • Normal diet • Limit foods that can cause gas (e.g., corn, cabbage, legumes). • Limit potentially irritating foods (e.g., coffee, spices, chocolate, cola). • Gradually reintroduce dairy products.

Support better

Sheet extracted from the SUPPORT training platform
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If necessary, I adjust my insulin doses:

If my blood sugar is higher for a long time:

Injections	Slow-acting insulin: Duration of action of 24 hours or less (e.g., Basaglar, Levemir): I may consider increasing my dose by 10-20% per day. (e.g., if my dose is 20 units per day, I could take 22).
	Rapid-acting (mealtime) insulin: I give insulin with meals as usual with the addition of a correction bolus according to my sensitivity factor if needed (wait 4 hours between each injection to avoid insulin stacking). If I have hyperglycemia within 2 hours of the meal, I increase my mealtime insulin doses by 10 to 20%.
Non-automated insulin pump	I can set a temporary higher basal rate for a 4-hour period at a time (10-50% higher, depending on blood sugar and duration of illness) and give correction boluses every 4 hours as needed.
Hybrid closed loop systems (automated insulin pump)	The system should be able to compensate for the higher blood sugars. However, if my high blood sugar persists and I use the Tandem Control IQ, I can create a profile with a 10-20% higher basal rate and a lower sensitivity factor (e.g., 2.5 instead of 3 so that the correction boluses are slightly more aggressive). With the 670G and 770G pumps it is sometimes necessary to return to the manual mode to increase the basal rate.

Be careful not to give too many correction boluses to avoid insulin stacking and hypoglycemia, especially if you have difficulty eating.

If my blood sugar is lower for a long time:

Injections	Slow-acting insulin: Duration of action 24 hrs or less (e.g., Lantus, Basaglar): I can decrease my dose by 10-20% per day as needed. Duration of action greater than 24 hrs (e.g. Toujeo, Tresiba): I can decrease my dose by 10-20% every 3 days if needed.
	Rapid-acting (mealtime) insulin: I give insulin with meals as usual. If I have hypoglycemia within 2 hours after the meal, I decrease my mealtime insulin doses by 10 to 20%.
Non-automated insulin pump	I can set a temporary lower basal rate for 4 hours at a time (start with 10-20% less).
Hybrid closed loop systems (automated insulin pump)	If I am having difficulty eating normally, I can (depending on the functionality of my system) set the activity mode, set a temporary basal rate or a higher target. If the hypoglycemic trend continues and I am using the Tandem Control IQ, I can create a profile with an increased sensitivity factor (e.g., 3 instead of 2.5 so that the correction boluses are less aggressive).

I go to the emergency if:

- My blood suagar is above 20 mmol/L and my ketones remain above 1.5 mmol/L with symptoms (e.g., nausea, vomiting).
- My ketones are above 3.0 mmol/L.
- I have continuous vomiting and can't drink.
- I have a fever with a temperature above 101.3°F (38.5°C) for more than 48 hours.

Reminder of medications to stop on sick days:

- Blood pressure medications (e.g., diuretics)
- Other diabetes medications (e.g., metformin, canagliflozin, dapagliflozin, empagliflozin, ertugliflozin). If you are taking medications containing SGLT2 inhibitors (e.g., canagliflozin, dapagliflozin), be aware that ketoacidosis can occur even with blood sugar levels within targets.
- Pain medications (e.g., ibuprofen).