

How to Manage Ketone Bodies

I should consider measuring my ketone bodies when:

- My blood sugar is higher than 14 mmol/L four hours after taking a correction bolus.
- My blood sugar is higher than 18 mmol/L between two meals.

I should try to identify the cause of my high blood sugar.

KETONE BODIES		SIGNS	SUGGESTED STEPS
Blood (mmol/L)	Urine		
0.0-0.5	0.5	Frequent urination Intense thirst	<ul style="list-style-type: none"> • Drink 250 ml of water every hour. • Check your blood sugar every 6 hours and whenever necessary.
0.6-1.4	1.5	Frequent urination Intense thirst	<ul style="list-style-type: none"> • Drink 250 ml of water every hour. • Add a correction bolus (calculated using your insulin sensitivity factor) to your mealtime insulin dose. • Measure your blood sugar and ketone bodies every 4 hours. • Contact your healthcare team if necessary.
1.5-3.0	4	Frequent urination Intense thirst Nausea Vomiting Abdominal pain Diarrhea	<ul style="list-style-type: none"> • Calculate a correction bolus <u>using your insulin sensitivity factor, and multiply the result by 1.5</u>. • Take this bolus immediately. • Check your blood sugar and ketone bodies every 4 hours and start the procedure over depending on the result. • Contact your healthcare team or go to the hospital if there is no improvement.
3.0+	8-16	Nausea Vomiting Abdominal pain Diarrhea Fruity breath	<ul style="list-style-type: none"> • Go to the hospital. • This is diabetic ketoacidosis.

“Fasting ketone bodies”

- Are not always associated with high blood sugar
- Are generally lower than 0.6 mmol/L
- Are not dangerous as long as there is insulin circulating in the body
- Will disappear when eating resumes

CAUTION

If you're pregnant or if you take one of the following medications, **you may experience ketoacidosis even if your blood sugar is normal.**

- Canagliflozin (Invokana®)
- Dapagliflozin (Forxiga™)
- Empagliflozin (Jardiance™)
- Ertugliflozin (Steglatro™)

You should become more vigilant and measure your ketone bodies if you experience nausea, vomiting, abdominal pain or fruity-smelling breath, even if your blood sugar is not high.