HEALTH BASICS

# Diabetic sick-day guidelines

Diabetic sick-day guidelines explain how to manage diabetes safely during an illness.

**WHAT IT IS**
A plan for managing diabetes during illness

**WHERE IT COMES UP**
Fever, infection, vomiting, diarrhea, or reduced food intake

**WHY IT MATTERS**
Helps prevent glucose emergencies and dehydration

**WHAT IT IS NOT**
Not a disease or diagnosis

**WHO TO ASK**
Your diabetes care team or pharmacist

**HOW IT IS CHECKED**
Glucose monitoring and blood or urine ketone testing

## Overview

Diabetic sick-day guidelines are instructions for managing diabetes when you are unwell. They are not a disease or diagnosis. They help you decide what to monitor, which medicines may need attention, and when to seek medical care.

Illness can affect blood glucose even if you are eating less. Infections, fever, pain, and physical stress can release hormones that raise glucose. Vomiting, diarrhea, or poor appetite can instead cause low glucose, particularly if you take insulin or medicines that can cause hypoglycemia.

A sick-day plan should be tailored to your type of diabetes, medicines, usual glucose range, and access to ketone testing. Plans for children, pregnant people, insulin-pump users, and people with kidney or heart conditions may include additional instructions.

Sick-day guidelines do not replace medical assessment. A minor cold may only require closer monitoring, while vomiting, rising ketones, or difficulty staying awake requires prompt help.

## How it works

Your body often releases stress hormones during illness. These hormones help provide energy for fighting the illness, but they can make insulin less effective. Glucose may rise even when you have not eaten.

If the body cannot use enough glucose for energy, it starts breaking down fat. This produces ketones. A small amount may occur with reduced food intake, but a dangerous buildup can lead to diabetic ketoacidosis, or DKA. DKA is most common in type 1 diabetes, although it can also occur in type 2 diabetes.

Blood ketone meters measure beta-hydroxybutyrate, the main ketone present during DKA. Urine strips detect ketones that have passed into the urine. Your plan should state when to test and what result requires help because action thresholds can differ by meter, age, treatment, and local guidance.

Medication instructions are also important:

- Insulin: Do not stop all insulin on your own. People with type 1 diabetes need background insulin even when they cannot eat. Meal or correction doses may need adjustment under an agreed plan.
- Insulin pumps: A blocked cannula, empty reservoir, or pump failure can interrupt insulin quickly. Follow your pump troubleshooting and backup-injection plan if glucose or ketones rise.
- SGLT2 inhibitors: These medicines can be linked to DKA during acute illness, dehydration, or reduced food intake. DKA may occur without very high glucose. Your plan may tell you to pause the medicine and check ketones.
- Metformin and other medicines: Some medicines may need to be paused during significant vomiting, diarrhea, dehydration, or poor intake. Others can cause low glucose if taken without food. Do not apply one rule to every medicine; use instructions for your exact prescription.

## Why it matters for your health

A written plan can help you act before glucose, ketones, or dehydration become difficult to manage. It also reduces guesswork about insulin, tablets, fluids, food, and testing.

Monitoring is useful because symptoms alone do not show whether glucose is high or low. A continuous glucose monitor, or CGM, can show trends, but it does not measure ketones. A finger-stick glucose check may be needed if the CGM reading does not match how you feel or is changing rapidly.

Fluids matter because fever, sweating, vomiting, diarrhea, and frequent urination can all cause

water loss. Dehydration can raise glucose further and can affect kidney function. If you cannot eat normally, your plan may suggest fluids containing carbohydrate as well as sugar-free fluids. The right choice depends on your glucose level and ability to keep fluids down.

Sick-day planning is especially important if you use insulin or an SGLT2 inhibitor, have previously had DKA, or have limited warning signs of low glucose. It is also useful when illness makes it hard to think clearly or manage medicines.

## What can go wrong

Sick-day guidelines relate to several conditions and treatment problems. The guidelines themselves do not cause symptoms.

Diabetic ketoacidosis is a dangerous buildup of ketones and acid in the blood. Warning signs can include vomiting, abdominal pain, deep or difficult breathing, increasing drowsiness, and dehydration. With SGLT2 inhibitors, DKA can occur when glucose is not markedly elevated.

Hyperosmolar hyperglycemic state , or HHS, involves very high glucose and severe dehydration, usually in type 2 diabetes. It can cause marked weakness, confusion, or reduced consciousness.

Hypoglycemia means glucose is too low. It can happen when you eat less but continue insulin or a medicine that lowers glucose. Sweating, shaking, confusion, unusual behavior, or difficulty waking can occur.

Dehydration and acute kidney injury can follow persistent vomiting, diarrhea, fever, or reduced drinking. Dehydration may also make some medicines less safe.

Missed insulin delivery can occur with pump or infusion-set problems. Because pumps use rapid-acting insulin, ketones may develop sooner than with a working long-acting insulin regimen.

## What you can do

Ask your diabetes care team for a written sick-day plan before you become ill. Keep it somewhere accessible and share it with anyone who may help you.

The plan should cover:

Keep glucose-testing supplies, ketone strips, insulin supplies, and any prescribed emergency hypoglycemia treatment available. Check expiry dates and store them as directed. Keep an up-to-date list of your medicines, including their names and usual schedules.

During illness, record glucose readings, ketone results, temperature, medicines, fluids, vomiting, and diarrhea. This information can help a clinician assess what is happening.

Seek same-day clinical advice if glucose remains above or below your planned range despite following your instructions, ketones are rising or above your action threshold, you repeatedly vomit, or you cannot keep enough fluid down. Also seek advice if you are unsure whether to pause or restart a medicine. Children, pregnant people, and frail older adults may need earlier assessment.

Seek emergency help for severe difficulty breathing, marked confusion, inability to stay awake, collapse, a seizure, or suspected severe dehydration. Severe hypoglycemia in someone who cannot safely swallow is also an emergency. Use prescribed emergency hypoglycemia treatment if available and call emergency services.

After an uncomplicated illness, routine follow-up is reasonable if your readings return to their usual pattern. Arrange a review if illnesses repeatedly cause very high or low glucose, you needed urgent care, or your current plan was difficult to follow.

- How often to check glucose
- When and how to test ketones
- How to handle each diabetes medicine
- What fluids or carbohydrate sources to use
- What to do if an insulin pump fails
- Which results require same-day or emergency care
- Who to contact outside normal clinic hours

## Common questions

Should I stop insulin if I am not eating?

Do not stop all insulin without specific medical instructions. Background insulin is essential in type 1 diabetes. Other doses may need adjustment according to your written plan and glucose results.

Does everyone with diabetes need to test ketones?

No. Ketone testing is particularly important in type 1 diabetes and may be advised for people with type 2 diabetes who use insulin or an SGLT2 inhibitor. Ask whether you need a blood ketone meter or urine strips.

Can I rely only on my CGM?

A CGM is helpful for trends, but it does not test ketones. Confirm glucose with a finger-stick meter if the reading does not match your symptoms or if your device advises confirmation.

When should I restart a medicine that was paused?

Follow the instructions for that medicine. Restarting may depend on eating and drinking normally, recovery from dehydration, and sometimes a check of kidney function. A pharmacist or diabetes care team can clarify your plan.

What if I do not have sick-day instructions?

Ask your diabetes care team or pharmacist for medicine-specific advice. If you have vomiting, ketones, persistent abnormal glucose, or difficulty drinking, seek same-day care rather than waiting for a routine appointment.

## Sources

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