Does an overnight CGM reading of 3.8 mmol/L prove hypoglycemia?

You asked: My CGM showed 3.8 mmol/L overnight, but I felt fine. Does that prove I have hypoglycemia?
Researched Oct 1, 2026

No. One CGM reading of **3.8 mmol/L (about 68 mg/dL)**, especially when you felt well, does not by itself prove that you have a hypoglycemic disorder.

For people treated for diabetes, a glucose value at or below **3.9 mmol/L (70 mg/dL)** is an alert level. It deserves attention because glucose may fall further. A value below **3.0 mmol/L (54 mg/dL)** is considered clinically important hypoglycemia. [1]

But a CGM measures glucose in the fluid under the skin, not directly in blood. Its value can lag behind blood glucose and can sometimes be inaccurate. An overnight low may be a **compression low**: pressure from lying on the sensor temporarily produces a falsely low reading. This often looks like a sudden drop during sleep and improves after you change position. [2]

Guide to continuous glucose monitors
A BMJ Learning guide explains the practical use and limitations of continuous glucose monitors.
Video · https://www.youtube.com/watch?v=QhciHyiqh-E

For someone **without diabetes or glucose-lowering medicines**, clinicians generally diagnose a hypoglycemic disorder only when *Whipple's triad* is documented:

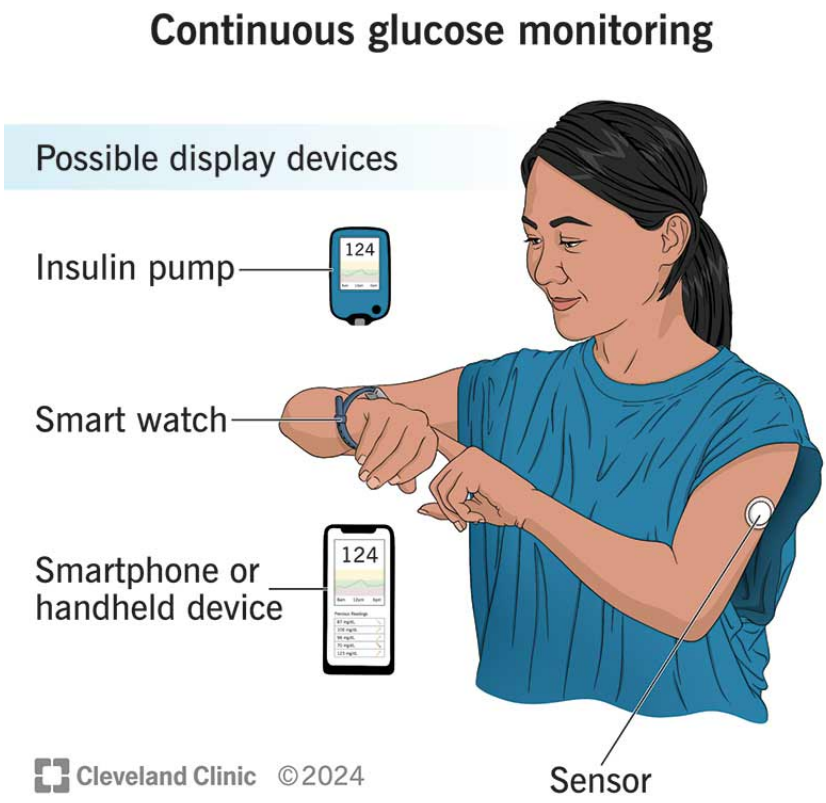
- symptoms or signs consistent with low glucose;
- a low **plasma glucose** result; and
- symptoms improving when glucose is raised.

A low sensor number without symptoms does not meet those criteria. A clinician may need a laboratory plasma-glucose measurement during an episode to investigate unexplained hypoglycemia. [3] [4]

What to do if it happens again

1. **Check your CGM trend and the sensor site.** If you were lying on the sensor, change position.
2. **Confirm with a finger-stick meter when you can**, especially if the result is unexpected, you have no symptoms, or it would change what you do. CGM education guidance specifically recommends a meter check for a suspected compression low or when symptoms and sensor results do not match. [2]
3. **If the finger-stick confirms a value below 3.9 mmol/L**, follow your own diabetes plan. A common approach is 15 g of fast-acting carbohydrate, then recheck in 15 minutes. Examples include glucose tablets, glucose gel, or about 120 mL (½ cup) of juice or regular soda. Repeat if still low. [2]

4. **Do not change insulin, pump settings, or other glucose-lowering medicine based on one uncertain reading** unless your prescribed plan tells you to do so.



This diagram shows how a CGM sensor sends glucose information to a phone, watch, or handheld reader. · Image source: Continuous Glucose Monitoring (CGM): What It Is

Treat a low reading as potentially real if you have shaking, sweating, fast heartbeat, confusion, dizziness, or trouble waking. Get emergency help if there is a seizure, unconsciousness, severe confusion, or inability to swallow safely; another person may need to give glucagon if it has been prescribed. [1]

Contact your diabetes clinician promptly if confirmed overnight lows recur, if readings are below 3.0 mmol/L, or if you use insulin or a medicine that can lower glucose. Bring the CGM overnight graph and any matching meter results. That record can help distinguish a recurring true low from sensor compression.

Sources

1. ISPAD hypoglycemia guidance https://www.ispad.org/static/7bea06a8-1a1d-42c8-892861d1cc754b13/CPCG2018-Ch-12-Assessment-and-management-of-hypoglycemia-in-children-and-adolescents-with-diabetes.pdf
2. UAMS CGM guide https://medicine.uams.edu/familymedicine/wp-content/uploads/sites/7/2025/07/Sturgis-Provider-Guide-3-11-25.pdf
3. Endocrine Society guideline https://profiles.wustl.edu/en/publications/evaluation-and-management-of-adult-hypoglycemic-disorders-an-endo/
4. RACGP review https://www.racgp.org.au/getattachment/e5311638-b32d-4a11-88b3-9a35ee268d83/Hypoglycaemia-in-nondiabetic-patients-an-evidence.aspx