



Hyperglycaemia – high blood glucose

What is high blood glucose?

High blood glucose occurs when the blood glucose level (BGL) is above 15mmol/L. It often happens slowly but it can also happen suddenly, depending on the cause.

What are the possible causes of high blood glucose?

- » infection/illness
- » not enough, or missed insulin or other diabetes medicines
- » greater than usual food intake (carbohydrates)
- » medications used to treat other illnesses, for example steroids and antipsychotics
- » emotional stress or pain
- » undiagnosed diabetes

How might a resident look and feel with high blood glucose?



thirsty



irritable



increased or excessive urine output



sleepy, tired, vague

- » increased or new confusion
- » recurrent infections such as urinary tract infections
- » oral or genital thrush
- » poor wound healing
- » signs of dehydration (drier than normal lips or skin)

Be aware of these diabetes emergencies

Diabetic Ketoacidosis (DKA)	Hyperglycaemic Hyperosmolar State (HHS)
Can develop rapidly	Develops over days or weeks
Type 1 diabetes and some residents with type 2 diabetes, for example those taking SGLT2 inhibitors	Type 2 diabetes
BGL above 15mmol/L or lower BGL if vomiting/diarrhoea	BGL above 25mmol/L
Signs of dehydration (sunken eyes, dry lips and tongue, poor skin turgor) Altered conscious state Nausea and vomiting Abdominal pain Deep sighing breathing Sweet acetone (fruity) breath	Signs of dehydration (sunken eyes, dry lips and tongue, poor skin turgor) Altered conscious state (including coma) Nausea and vomiting Changes in vision (hemianopia) Weakness of one side (hemiparesis) Seizures

How do I check if a resident has high blood glucose?



- » use a glucose meter to check the blood glucose level (BGL)
- » a reading above 15mmol/L indicates hyperglycaemia
- » follow your facility's policy and resident's care plan

How do I respond when a resident has high blood glucose?



Resident is conscious:

- » **BGL above 15mmol/L** – investigate cause and recheck BGL in two hours and check ketones in those residents at risk of DKA (see table)
- » **BGL above 15mmol/L for 4 to 6 hours** – follow care plan and sick day management plan
- » **BGL above 15mmol/L for 8 or more hours** – this requires prompt medical review
- » **BGL reading of 'HI'** – seek medical help immediately.



Resident has reduced level of consciousness:

- » this is a medical emergency (follow the facility emergency protocols)
- » call for help
- » do not put anything in the resident's mouth.

Next steps

- Review the incident and investigate the underlying cause.
- Update the resident's diabetes management plan (including the sick day management plan).

Read:

- **Six Minute Intensive Training poster:** Sick day management
- Diabetes management in aged care: a practical handbook – chapter 8: Hyperglycaemia