

High blood glucose in type 2 diabetes (hyperglycaemia)

Blood glucose levels can sometimes go out of your target range. Knowing your target range is important in managing diabetes.

Am I at risk of high blood glucose?

Yes. Any person with diabetes can have high blood glucose. Over time, people with type 2 diabetes require increases and/or changes to their medication to stay in their target range.

What causes high blood glucose?

- > not enough medication (tablets or injectables)
- > missing diabetes medication/insulin doses
- > increase in carbohydrate food and fluid intake
- > miss match of carbohydrate intake with medication
- > decrease in physical activity
- > increase in weight
- > illness, infection or surgery
- > some medications (eg prednisolone).

How will I know if I have high blood glucose?

Symptoms of high blood glucose may include thirst, tiredness, lack of energy, passing lots of urine (eg especially at night), weight loss or blurred vision. Many people do not get any symptoms until their blood glucose level is high for some time. Some symptoms can also be mistaken or overlooked.

Home blood glucose monitoring will identify high blood glucose.

What is the risk of high blood glucose?

High blood glucose is when your blood glucose is greater than your target level. Occasional higher readings are expected and should not cause long term problems.

If high blood glucose persists, taking action to improve your blood glucose levels will prevent illness and reduce your risk of diabetes complications.

What should I do if I have high blood glucose?

- > Check that you are taking your diabetes medication as directed. Try to remember if you:
 - > took your correct diabetes medication at the correct time
 - > stored your medication correctly and that it is within the expiry date
 - > gave the injectable medication dose correctly and that the delivery device was working.
- > Check for any changes in your carbohydrate exchange and fluid intake. Your eating plan may have changed and may need to be reviewed.



- > Check for changes to your physical activity. Your physical activity plan may need to be reviewed.
- > Check your blood glucose level more often to see if the higher reading was a one off or not.
- > If you are feeling unwell (eg fever, infection, vomiting), start your **sick day action plan**.
- > If you are unwell (eg fever, infection, vomiting) or your blood glucose is greater than 15mmol/L for 8-12 hours or more. Start your **sick day action plan** even if you feel OK.

Can I use extra diabetes medication?

Adjustments to your diabetes medication (tablets or injectables) may be possible but can also be very dangerous.

Talk to your doctor or credentialled diabetes educator about your diabetes medication if you have high blood glucose.

Can I use extra insulin?

Adjustments to your insulin doses or an extra dose (eg called a 'supplemental' or 'correctional' dose) of rapid-acting insulin can help control high blood glucose.

A correctional dose of insulin can be used to temporarily correct a high blood glucose level during:

- > unexpected illness
- > as part of a treatment plan (eg when another medical condition causes your blood glucose to rise for an expected period of time (eg asthma requiring prednisolone, on renal dialysis days).

Talk to your credentialled diabetes educator about your insulin dose/s if you have high blood glucose.

When should I seek help?

Contact your doctor if:

- > your blood glucose is more than 15mmol/L for more than 24 hours.

Children or frail aged should consult a doctor early.

Go to your nearest hospital if:

- > you are unable to eat or drink or you have been vomiting for more than 4 hours
- > symptoms such as drowsiness, confusion, disorientation, heavy breathing, dehydration or severe abdominal pain
- > blood glucose stays below 4mmol/L and you cannot get up
- > too unwell to stay home.

Where can I go for more information?

Diabetes Australia

www.diabetesaustralia.com.au

National Diabetes Services Scheme

www.ndss.com.au

Australian Diabetes Educators Association

www.adea.com.au

Department of Health

www.health.gov.au

Suggestions for your plan.

1. Start your sick day action plan immediately if;
 - > blood glucose is more than 15mmol/L for 8-12 hours or more, or you are unwell eg fever, vomiting, unable to eat or drink
2. Monitor your blood glucose and ketones
 - > test blood glucose at least 4 times a day (eg before meals and at bedtime)
 - > test ketones if required and directed to do so.
3. Correctional to take your diabetes medications (tablets or injectables)
 - > If you are not eating, feel sick (nauseous), are vomiting and/or have diarrhoea, you may need to stop your diabetes tablets (eg metformin). Consult your doctor, diabetes specialist or credentialled diabetes educator.
4. Continue to take your insulin
 - > If you use insulin, you may need extra insulin. If you do not have instructions to change your usual insulin doses or use rapid-acting correctional insulin doses, ask your doctor or credentialled diabetes educator.
5. Contacts
 - > if you are sick and home alone, phone and tell someone
 - > you may need to consult your doctor.
6. Prevent hypoglycaemia (low blood glucose)
 - > nausea, vomiting or diarrhoea may cause hypoglycaemia – if you are at risk of low blood glucose, treat any low reading using your **hypo action plan**.
7. Have a list of other carbohydrate foods and drinks you can use
 - > ½ to 1 cup of fluid (125-250ml) every hour to avoid dehydration. If you **can't** eat – replace food with:
 - > sweetened fluids if blood glucose 15mmol/L or less (eg soft drink, juice, ordinary jelly)
 - > sugar free fluids if blood glucose more than 15mmol/L (eg diet drinks, diet jelly, diet ice blocks.
 - > Gastrolyte can help replace fluid lost because of vomiting or diarrhoea.
8. A sick day kit should include (but is not limited to):
 - > telephone numbers to call (eg family, doctor, local hospital/diabetes clinic, credentialled diabetes educator, diabetes specialist)
 - > list of foods and fluids you can have if you can't eat or drink normally
 - > a thermometer and paracetamol for pain relief and fever treatment
 - > in-date blood glucose and ketone testing strips and spare record book
 - > glucose jelly beans, glucose drink
 - > extra syringes or injecting devices (if used)
 - > rapid-acting insulin (if prescribed)
 - > a copy of your sick day action plan and hypo action plan
 - > a copy of the ADEA Sick Day Management Guidelines for diabetes medication/insulin doses.

My sick day plan

Contact details	Doctor: _____ Credentialed diabetes educator: _____ Health Direct (24hr health advice line) ph 1800 022 222	
My target range is:	Fasting: _____ Pre meal: _____	Before bed: _____ Overnight: _____
Instructions for blood glucose monitoring	Fasting: _____ Pre meal: _____ Before bed: _____ If hypo: _____	2 hourly: _____ 4 hourly: _____ 6 hourly: _____ Overnight: _____
Instructions for ketone monitoring	Risk of diabetic ketoacidosis due to duration of type 2 diabetes or use of diabetes medication (eg SGLT2). <p style="text-align: right;">discussed / not discussed</p>	
Hypo action plan	Updated: _____ Not applicable: _____	
Instructions for usual diabetes medications	You may need to stop taking your diabetes medication when sick. <i>ADEA 2014 'Management of glucose lowering medicines during illness'</i> * <p style="text-align: right;">discussed / not discussed</p>	
Instructions for correctional insulin	Extra insulin may be needed. <i>ADEA 2014 'Supplemental Insulin Guidelines'</i> * <p style="text-align: right;">discussed / not discussed</p>	
Instructions for types of fluids and food	Alternative food: _____ _____ Alternative fluid: _____ _____	
When to visit your nearest hospital	Feeling drowsy, confused, unable to eat or drink, vomiting persists. Blood glucose more than 15mmol/L for _____ hours. Unable to take medications (eg vomiting, insulin or injectable device failure).	
Sick day kit	Checklist List of medication/s Vaccination history Guidelines for diabetes medication / insulin management Individual instructions	
Dated:	Name: _____	Sign: _____

*ADEA 2014 Clinical guiding principles for sick day management of adults with type 1 and type 2 diabetes.

For more information

CHSA Diabetes Service
Country Health SA LHN
 PO Box 287, Rundle Mall
 ADELAIDE SA 5000
 Telephone: (08) 8226 7168
www.chsa-diabetes.org.au

