



Managing sick days for adults with type 2 diabetes who use insulin

Acknowledgment

This fact sheet for people with diabetes is intended to partner the *Clinical Guiding Principles for Sick Day Management of Adults with Type 1 Diabetes or Type 2 Diabetes: A Guide for Health Professionals*, which were first published by ADEA in 2006, revised in 2011 and further revised in 2016 and 2020 with NDSS funding. This revised fact sheet, *Managing sick days for adults with type 2 diabetes who use insulin*, was developed in consultation with an expert panel of health professionals and people living with diabetes.

Disclaimer

This information is intended as a guide only. It should not replace individual medical advice. If you have any concerns about your health, or further questions, you should contact your health professional.

Published by

Australian Diabetes Educators Association
PO Box 163
Woden ACT 2606
p. 02 6287 4822 f. 02 6287 4877
www.adea.com.au
Published August 2020
© Australian Diabetes Educators Association



Managing sick days for adults with type 2 diabetes who use insulin

This guide can help you plan how to manage your diabetes when feeling sick and know when to get medical help.

Illness and infection may increase or lower your blood glucose levels and make it harder to manage your diabetes. A plan to manage sick days before you become unwell is essential.

The Australian Diabetes Educators Association (ADEA) recommends you work with your Credentialed Diabetes Educator (CDE) to prepare a Sick Day Kit. Keep it up to date. Your Sick Day Kit should always include your personal Sick Day Action Plan.

When to use your Sick Day Action Plan

You should follow your Sick Day Action plan when:

- you feel unwell – even if your blood glucose is in your target range
- your blood glucose level is greater than 15.0 mmol/L for 6 hours or more (3-4 hours if you use an insulin pump or are pregnant), even if you feel well.

Why sick day management is important

Illness often causes a rise in blood glucose levels due to the effects of stress hormones such as cortisol and adrenaline being produced by the body. When you have diabetes, your pancreas may not be able to produce enough extra insulin to use the extra glucose. The body tries to get rid of the extra glucose through the urine, leading to dehydration.

Dehydration and high blood glucose levels can sometimes be severe and lead to a serious condition called Hyperglycaemic Hyperosmolar Syndrome (HHS) which can be life threatening. While it is more common in older people, it can occur at any age.

Symptoms of HHS can develop over a number of days and include:

- very high blood glucose levels (often over 30.0 mmol/L)
- excessive thirst and/or a dry mouth
- increased urination
- feeling drowsy, weak, or confused
- dry skin
- fever.

If you are taking diabetes medications called SGLT2-inhibitors (brand names include Forxiga, Qtern Xigduo, Jardiance, Jardiamet and Glyxambi) you are also at risk of developing a condition called diabetic ketoacidosis (DKA) which requires urgent medical attention.

DKA can cause similar symptoms but blood glucose levels are sometimes not high. DKA can also lead to nausea, vomiting, stomach pains, rapid breathing and a fruity-smelling breath. If you experience any of these symptoms, it is important that you seek urgent medical assistance.



Key steps for diabetes sick day management

These steps can help you to manage your diabetes when you are unwell and can reduce the risk of developing serious problems.

Check your blood glucose levels more regularly

- Your Sick Day Action Plan will recommend how often to check your blood glucose levels when you are unwell.
- If your blood glucose levels are above 15.0 mmol/L for 6 hours or more (3-4 hours if you use an insulin pump or are pregnant) it is usually recommended that you check your levels every 2 hours until they are back in your target range.
- If your blood glucose levels are low, it is usually recommended that you check every 10-15 minutes until they are back in your target range.
- If you use a continuous or flash glucose monitor, it is important to confirm high readings with a fingerprick blood glucose check before taking action to correct them, remembering that there is a lag time between the two readings.
- Some pain medications (e.g. paracetamol and aspirin) and high doses of vitamin C can affect the accuracy of certain continuous or flash glucose monitoring devices. If you use one of these devices your Sick Day Action Plan should specify which medications are safe to take.

Continue taking your diabetes medication

- Some diabetes medications need to be temporarily stopped if you have significant vomiting and/or diarrhoea. Your Sick Day Action Plan should state this.
- If you are vomiting or have diarrhoea you need to stop taking metformin (brand names include Diabex, Diaformin, Metex, Formet), SGLT-2 inhibitors (brand names include Forxiga, Qtern Xigduo, Jardiance, Jardiamet, Glyxambi) and GLP-1 agonists (brand names include Victoza, Byetta, Saxenda, Ozempic).
- If you are taking a sulphonylurea (brand names include Diamicon, Glyade, Amaryl, Glimel) and are unable to eat you may need to stop taking it or reduce the dose to prevent hypoglycaemia.
- Restart your medications when you are feeling well again (normally when you have been eating and drinking normally for 24-48 hours).
- Most other diabetes medications can be continued if you are unwell.

Continue taking insulin and adjust your doses if needed

- You usually need extra insulin when you are unwell even if you are eating less than usual.
- It is important never to stop taking your insulin, although the dose may need adjusting.
- Your Sick Day Action Plan will explain how and when to adjust your insulin doses.
- If you have significant vomiting and/or diarrhoea, and poor food intake, your insulin doses may need to be reduced by 10-20%.
- If your blood glucose levels are above 15.0 mmol/L for six hours or more, you may need to increase your basal or intermediate insulin by 10-20%.
- If your blood glucose levels remain high with an increase in basal insulin, you may need extra doses of short or rapid-acting insulin (if you take these types of insulin).
- If you don't usually take rapid-acting or short-acting insulin, your doctor may prescribe this for you to use when you are unwell.

Consider whether you need to cease any other medications you are taking

- There are other medications you might be taking that should be temporarily stopped if you are vomiting and/or have diarrhoea.
- Discuss with your doctor whether you are taking any other medications that need to be stopped when you are unwell.

Keep up food and fluids if possible

- Try to have half to one cup (125-250mls) of fluid every hour to avoid dehydration – this could include water, tea, sugar-free cordial/lemonade, or any other sugar-free non-alcoholic drinks.
- Eat foods containing carbohydrate regularly to keep up your energy levels and prevent low blood glucose levels. If you feel nauseous, try having foods such as toast, plain cracker biscuits, plain rice or pasta, or mashed potato. If you are unable to eat your normal meals, aim to have around 15g of carbohydrate every hour during waking hours from easy to digest carbohydrate foods.
- If you can't eat, try to replace the carbohydrate in your usual meals with carbohydrate-containing fluids.
- If you are eating carbohydrate foods and your blood glucose level is more than 10.0 mmol/L, choose carbohydrate-free fluids.



Carbohydrate-containing fluids*	Carbohydrate-free fluids
Fruit juice (10g/100mls)	Water
Regular lemonade (9g/100mls)	Diet lemonade
Regular cordial (10g/20mls concentrate)	Diet cordial
Gatorade original (6g per 100mls)	Broth
Tea with sugar (5g per teaspoon sugar)	Tea without milk or sugar
Milk (5g/100mls)	Herbal tea
Regular jelly (15g per half cup)	Sugar-free jelly
Lemonade ice-block (~11g per 75g serve)	Hydralyte ice-block (~1g per serve)

* approximate carbohydrate values given in brackets – may vary between brands

Examples of foods providing 15g of carbohydrate:

- 1 slice of bread or toast
- 1 small banana
- 6 water crackers, 9 rice crackers or 2-3 medium plain cracker biscuits
- ¼ cup cooked rice or ½ small microwave rice cup
- ½ cup mashed potato
- 2 plain sweet biscuits (e.g. milk arrowroot)

Seek help if needed

- When you're unwell it can be hard to follow your Sick Day Action Plan, especially if it's the first time.
- Include in your Sick Day Action Plan details of who might stay with you to help support you – this could be a family member, friend, or neighbour.
- Phone your CDE/ medical team early for help; this may prevent you from getting worse and needing emergency care.
- Seek medical advice to treat the underlying illness or infection.



Sick Day Kit

Your diabetes Sick Day Kit should include the following:

- your Sick Day Action Plan including emergency contact details (people you can call on for help if needed such as family, friends or neighbours, members of your healthcare team and your local hospital emergency department)
- spare insulin pens and pen needles or syringes
- a record book/diary or smartphone App to record results of your monitoring and insulin doses taken
- a thermometer (optional)
- foods to treat hypoglycaemia such as glucose gels, tablets or jellybeans
- easy to consume carbohydrate foods such as plain biscuits or crackers
- fluids including water, sweetened and sugar-free drinks
- fluids such as Gastrolyte® or Hydralyte® (these can help to keep you hydrated if you are vomiting or have diarrhoea)
- pain relief medications (if you use a continuous glucose monitor, check whether some pain medications (paracetamol and aspirin) may affect the accuracy of your device).

Remember to check your Sick Day Kit at least every three months to make sure items haven't expired. Replace used items.

When to seek urgent medical help

Your Sick Day Action Plan can help you to manage sick days at home. However, there are times when you may need to seek urgent medical help (e.g. visiting your local hospital emergency department). You should always seek urgent medical assistance if you:

- have glucose levels that continue to rise despite following your sick day plan
- experience persistent hypoglycaemia (low blood glucose levels)
- have persistent vomiting, especially if greater than 4 hours, or if it becomes stained with red or yellow/green
- have symptoms of significant dehydration (including increased thirst, dry mouth, weakness, feeling faint or dizzy, rapid heartbeat, headache, confusion, blurred vision, dry skin and lack of sweating and reduced urination or dark urine)
- become drowsy or confused
- develop deep or unusual breathing
- have stomach pain
- or your support person(s) are unable to carry out or follow your Sick Day Action Plan.

It is important that you don't drive if you have any of the symptoms above. If you don't have someone to drive you to the hospital, call 000 for an ambulance.

