

The nitty gritty stuff

- Getting help - Diabetes Case Conference
- OzCDEP
- Healthpathways
- Sick Day Management
- Peri-operative management
- Overseas travel
- Diabetes Contraception and Pre-pregnancy planning (DCAPP)



Sick day management in T2D



Dr Hamish Russell

Sick day management in T2D

Balance between hypoglycaemia and hyperglycaemia:

- Decreased oral intake – carb containing food and fluids
- Change in physical activity
- Fluid and electrolyte losses
- Varying medication use and absorption
- Limited and unpredictable beta and alpha cell reserves
- Drug interaction especially certain antibiotics
- Adreno-cortical drive
- Sepsis



Prime objectives

Avoidance of:

1. Diabetic Ketoacidosis (DKA)
2. Dehydration
3. Symptomatic hyperglycaemia
4. Hypoglycaemia

At the same time,

- Treating infection and sepsis if present
- Managing other co-morbidities
- Detecting complications
 - Acute renal failure
 - Cardiac failure
 - Cardiac arrhythmias

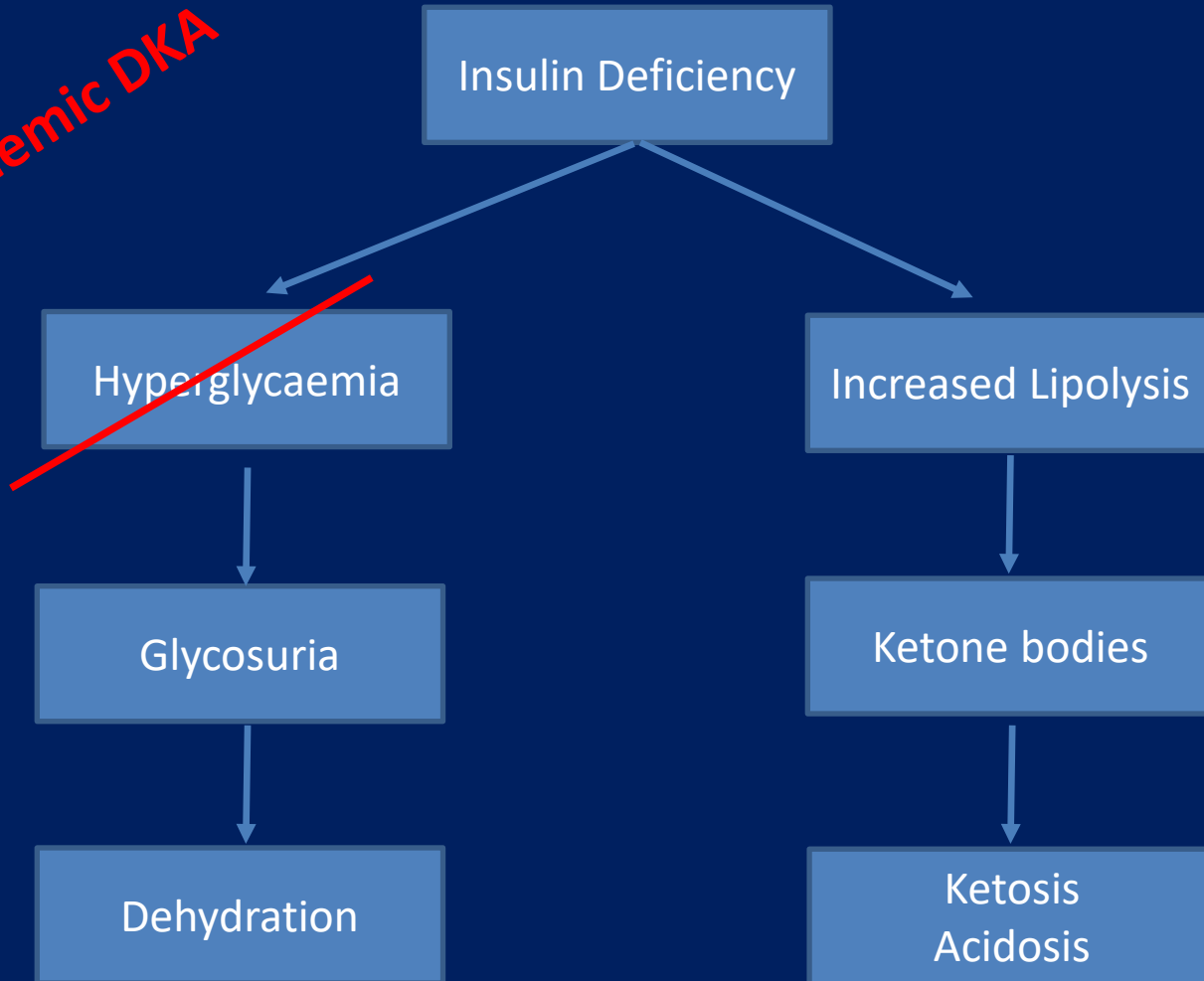
Other factors to consider

- Cardiovascular
- Renal impairment
- Hepatic
- Inflammatory bowel disease
- Mental illness
- Family support
- The very young and the very old
- ***SGLT2 inhibitors***



Diabetic Ketoacidosis

Euglycaemic DKA



Management

- Monitor BSL 2-4 hours
- OK if BSL slightly high but keep <15 mmol/L
 - May need more insulin – rapid acting
 - Increase by 10% of total daily insulin dose to reduce BSL
 - Consume more sugar containing fluids to maintain BSL
- Maintain fluids and electrolytes
- Stop Metformin, SGLT2 inhibitors, acarbose
- DO NOT STOP Insulin

5 sick day diabetes management principles:

1. Written **Sick Day Plan** : when to contact the doctor
2. Frequent blood glucose and ketone monitoring. Adjust insulin dose accordingly.
3. DO NOT STOP INSULIN but consider omitting some oral medications
4. Monitor and maintain hydration with adequate salt and water balance.
5. 5. Treat any underlying, precipitating illness.

Managing sick days for type 2 diabetes

When you have type 2 diabetes, everyday illnesses or infection can affect your blood glucose levels.

It's important to be prepared before you get sick – have a personalised sick day action plan and sick day management kit ready to use at the earliest sign of illness. Discuss putting together your sick day action plan and kit with your diabetes team.

What is a sick day?

A sick day is when you have an illness or infection and need to make changes to your usual diabetes management to help prevent your blood glucose levels from going too high or too low. These changes are usually only needed until you are well again.



Why it's important to manage sick days

Being unwell can make it more difficult to manage your diabetes. This is because stress hormones are released by you when you are sick. These hormones increase the amount of sugar in your bloodstream, and they make it difficult for insulin to do its job, which can cause your blood glucose to rise.

If you are sick and have high blood glucose levels, you may become dehydrated. This can lead to drowsiness and confusion, so it's important to seek medical attention.

What to do

Start following your plan or have your doctor monitor you if you are sick.

12. Other, including education programs available for you and your support person(s)

NAME: _____

To consider	What to do	Agreed special actions
1. When to use the Plan		
2. What to do if support person cannot be contacted	If no one available, seek medical assistance	
3. Food	How much How often What type	
4. Fluid	How much How often What type	
5. Medications	How much How often What type	
6. Blood glucose and ketone levels at which to start giving extra short/rapid acting insulin	What to increase or decrease What to start or stop	
7. Insulin		
<ul style="list-style-type: none"> • Amount for 5% of daily dose • Amount for 10% of daily dose • Amount for 15-20% of daily dose 		
8. Glucagon		
9. Other medical conditions/emergency plans		
10. Seeking supervised medical care		
11. Where to go in an emergency		24 hour medical team contact details, including out of office hours/weekend/public holidays
12. Other, including education programs available for you and your support person(s)		If the plan is not effective or you can't contact your medical team and you are concerned



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Sick Day Management of Type 1 Diabetes

Red Flags

Ketoacidosis is life-threatening if it remains unrecognised, refer suspected ketoacidosis to Emergency Department.

Background

[About sick day management of Type 1 diabetes](#)

About sick day management of Type 1 diabetes

The goal of sick day management is to prevent development of ketoacidosis.

Ketoacidosis develops with insulin deficiency as a consequence of one or more of the following:

- Insulin omission
- A concurrent illness where insulin requirements are increased above normal
- Insulin pump line occlusion preventing normal insulin delivery
- A result of glucagon administration.

Assessment

1. Check for signs and symptoms of [ketosis](#) and dehydration.

Ketosis and dehydration

Signs and symptoms:

- High BGLs with ketones present on blood (> 0.5) or urine (small or greater)
- Abdominal pain
- Vomiting
- Dehydration
- Hypotension, tachycardia or tachypnoea
- Acetone smell on the breath
- Confusion
- Drowsiness which may lead to coma

2. Make sure the patient has:

- a current sick day plan, and they understand it

healthpathways

When to bail out

- Diagnosis unclear
- Vomiting beyond 2-4 hours (particularly in young children or elderly)
- Unable to maintain blood glucose above 3.9 mmol/L
- BSL continues to rise despite extra insulin doses
- Blood ketones remain elevated >1.5 mmol/L or large urine ketones despite extra insulin and hydration
- Signs of cardiorespiratory compromise – hypotension, tachycardia
- Signs of acidosis – kussmaul breathing, acetone breath





Travel & Insulin

Dr Chee Khoo

Competing interests: Hypo vs Hyper

Airline food

Holiday food

Altered physical activity

Timing of meal servings



Issues to consider

- Pen storage
- Time Zone differences
- Adequate meds and insulin
- Adequate strips for monitoring
- Sick Day Plan
- Documentation
- Hypoglycaemia kit
- Basic first aid kit



Time Zone Adjustments

Westward travel crossing >5 time zones

“Gain time”

Monitor frequently first 24-48 hours. Likely to need more insulin first 24 hours. Adjust accordingly

Eastward travel crossing >5 time zones

“Lost time”

Monitor frequently first 24-48 hours. Likely to need less insulin first 24 hours. Adjust accordingly.



Travel

Careful planning before travelling is essential when you have diabetes. There are several things to consider before you go, including your diabetes management and general health, what to pack, travel insurance, available food choices and any special requirements for flying.

Whether you are travelling by plane, train, boat or motor vehicle, within Australia or overseas, plan early to make sure you have everything ready before you go.



Preparing for your trip

Talk to your doctor about your travel plans well in advance of your trip. Ask for a typed letter outlining:

- » your medical conditions
- » your diabetes medications (including dosage and how often you take them)
- » devices you use for diabetes (such as a blood glucose meter, lancet, insulin pen/syringes or insulin pump)
- » the importance of you carrying your medications with you at all times
- » that if you are at risk of low blood glucose levels (hypoglycaemia or a hypo), you need to carry hypo treatment with you at all times
- » that your insulin pump or continuous blood monitor (if you use one) must not be removed (even when going through airport security)
- » any other medications you take.

If you are travelling overseas, think about whether the letter needs to be translated into the languages of your destinations. Take several copies of this letter or have it available on an electronic device (such as a smart phone or tablet). Present it at security checkpoints or medical services if necessary.

Discuss your sick day management plan with your diabetes educator. Put together a sick day management kit before travelling, and make sure you pack it in your carry-on luggage.

Helpline 1300 136 588

ndss.com.au

Thank you



Questions?

Evaluation please