

Sick Day Rules: Information for Parents and Carers - Multiple Daily Injections

Paediatric Diabetes Department

Sick Days for Multiple Daily injections (MDI)

If you suspect your child may be unwell, make sure you have a good supply of the following:

- ✓ Blood ketone strips (ensure they are in date)
- ✓ Sweet food and drinks
- ✓ Rapid-acting insulin
- ✓ Blood glucose strips

Never stop or reduce your child's long-acting insulin i.e., Lantus or Levemir even when unwell and eating less than usual.

What is happening inside your child's body?

One of the body's responses to stress and illness is to produce more glucagon (blood glucose raising hormone). This will most likely increase their insulin requirements. However, it is also usual to eat less when feeling unwell; therefore, these two factors must be considered and managed throughout the days your child is unwell.

Important tips

- Test your child's blood glucose levels **2-4 hourly** depending on severity of illness.
- Check your child's blood regularly for **ketones**. If levels are above 0.6mmol/mol, see advice under "What are ketones?"
- Encourage your child to **drink plenty of water** or unsweetened fluids. When the blood glucose levels are high, your child is likely to be passing more urine and therefore, more likely to become dehydrated.
- If your child is **unable to eat normally** replace their meals/snacks with something sweet e.g., biscuits, ice cream, fruit juice, milkshakes etc to give their body nourishment and to prevent hypoglycaemia.



Do I need to adjust my child's insulin dose?

Depending on the illness the blood glucose levels may increase, and you will need to give more rapid-acting insulin i.e., NovoRapid or Humalog. As a general rule, you will need to give your child an extra bolus of fast acting insulin as a correction dose, if their blood glucose levels are above 10mmol. Alternatively, follow the advice on their 'dose advisor' meter or insulin pump.

If the blood glucose levels are constantly low, your child will need *less* fast-acting insulin i.e., NovoRapid or Humalog. (This only tends to occur with younger children or with vomiting and diarrhoea). Remember the only way to find out what your child's requirements are is to test your child's blood glucose levels regularly.

What are Ketones?

Ketones are made when the body breaks down fat to use as energy when it cannot use carbohydrates. You can check if your child has ketones by testing a drop of their blood with a blood ketone meter. All families should have one of these for home and school. Please speak to your Diabetes nurse if you have not been given one.

Diarrhoea and Vomiting

The amount of insulin reduction will depend on the blood glucose levels and presence of vomiting and/or diarrhoea. If the blood glucose levels keep dropping despite intervention, we advise to set a reduced temporary basal rate of between 50 - 75% of the normal basal rate whilst the diarrhoea or vomiting continues.

Who to contact for advice

The Paediatric Diabetes Nurses are not always available during office hours (09:00 -17:00) on **01932 723314**

Urgent and Out of Hours access

Out of hours and urgent access is available via the General Paediatric Team through Paediatric A&E or by contacting switchboard for the on call General Paediatric Registrar on 01932 872000.

If not tolerating drinks/fluids – go to your local A&E Department

***Reference: University College London Hospital, Paediatric Diabetes Team.*

Managing high blood glucose levels with ketones (MDI)

Blood Ketones	Actions	
Less than 0.6 mmol/L	<ul style="list-style-type: none"> Use meter to calculate correct bolus Give advised correction Re-check in 2 hours 	<p>All correction boluses should be "Rapid acting insulin".</p> <p>This is your normal mealtime insulin e.g., NovoRapid, Humalog or Apidra</p>
0.6 – 1.4 mmol/L	<ul style="list-style-type: none"> Use meter to calculate correct bolus and increase this by 50% (OR use illness setting) Give clear sugar-free fluids Re-check in 2 hours 	
1.5 – 2.9 mmol/L	<ul style="list-style-type: none"> Use meter to calculate correction bolus and increase this by 100% (i.e. double correction dose) Give clear sugar-free fluids Re-check in 2 hours Call the Diabetes Team if not improving 	
More than 3.0 mmol/L	<ul style="list-style-type: none"> As above Re-check blood glucose and ketones after 2 hours If remains unchanged – go to A&E as high risk of ketoacidosis 	

Managing blood glucose <5.5 mmols with Ketones (MDI)

Blood Ketones	1. Actions	2. Additional Actions based upon blood glucose level
Less than 0.6 mmol/L	Treat low blood glucose if hypoglycaemic	<p>If experiencing recurrent hypos, may need reduction of long-acting insulin dose.</p> <p>Ring Diabetes Team for advice</p>
0.6 – 1.4 mmol/L	<ul style="list-style-type: none"> Take 20g carbohydrate and clear fluids containing sugar Re-check blood glucose and ketones in 2 hours 	
1.5 – 2.9 mmol/L	<ul style="list-style-type: none"> Take 20g carbohydrate and clear fluids containing sugar Re-check blood glucose and ketones in 2 hours Repeat above steps again If remains unchanged after 4 hours, then seek urgent advice 	
More than 3.0 mmol/L	<ul style="list-style-type: none"> As above If remains unchanged – Call the Diabetes Team / go to A&E 	

What if the ketones don't go away and my child isn't getting better?

Ketones are an acid and can make your child very sick because too many can alter the acidity of the blood and may cause diabetic ketoacidosis (DKA). **This is life threatening and requires urgent medical attention.**

If ketones are above 0.6mmol/mol, watch out for the following signs and symptoms of DKA:

- Nausea and vomiting
- Abdominal pain
- Deep rapid breathing
- Breath smelling like pear drops or nail varnish
- Drowsiness
- Eventual unconsciousness

Remember

- To treat the symptoms of the illness as well e.g., paracetamol (Calpol) for a temperature. Ask your pharmacist for sugar free alternatives
- To visit your GP if the illness needs treatment e.g., antibiotics for chest infection.
- To check blood glucose levels and ketones regularly and act upon them if abnormal.
- To call the diabetes team if you have any questions or concerns. It may mean your child needs to come into hospital for extra fluids via a drip or extra insulin.

If not tolerating drinks/fluids – go to your local A&E Department

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We can provide interpreters for a variety of languages, information in larger print or other formats (e.g. audio) - please call us on 01932 723553.



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यदि आपको अनुवाद की ज़रूरत है तो कृपया इस नंबर पर फोन करें: 01932 723553

اگر آپ اس کا اردو زبان میں ترجمہ چاہتے ہیں، تو براؤکرم اس فون نمبر 01932 723553 پر رابطہ کریں

Jeżeli chcemy, aby te informacje w innym języku, proszę zadzwonić 01932 723553

Se precisa de uma tradução por favor contacte: 01932 723553

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