

# Sick Day Rules for children with diabetes on insulin pumps

This leaflet outlines 'Sick Day Rules' for children with diabetes who are on insulin pumps.

When you are ill your body needs more energy to fight the infection. Glucose is released from your body stores to do this, so the blood glucose tends to go up even if you are not eating. This means that you need more insulin than usual when you are ill. If you do not give enough insulin then your body cannot use the extra glucose so will start to break down fat for energy. When fat is broken down, this produces ketones.



**Ketones are very dangerous!**

## What are ketones?

Ketones are acids which can quickly make you feel very unwell and can make you vomit. They can make you feel breathless. If you do not get rid of the ketones, you can become extremely unwell and would need urgent hospital treatment (diabetic ketoacidosis (DKA)).

**Ketones can still be produced when you are ill even when your blood glucose is low.**

**Therefore:**

- **Never stop your insulin even if you are not eating**
- **Always check for ketones if you feel unwell regardless of your blood glucose level**
- **Inform your Diabetes Team of illness**

This document can be made available in other languages and formats upon request.

Paediatric Unit, October 2017. Review due: October 2019

**NEVER STOP YOUR PUMP IF YOU ARE UNWELL + ALWAYS CHECK FOR KETONES IF YOU ARE UNWELL REGARDLESS OF BLOOD GLUCOSE OR IF WELL, WHEN BLOOD GLUCOSE IS ABOVE 14 mmols/l**

**CHECK BLOOD KETONES**

**Blood Ketones less than 1.0**  
 Check pump running and check infusion set for blockages or disconnection  
 ↓  
 Give correction bolus with pump  
 ↓  
 Drink plenty  
 ↓  
**Check blood glucose and ketones in 2 hours**  
 If ketones still less than 1.0 If ketones more than 1.0  
 If blood glucose is not coming down give second correction bolus with **PEN** Follow advice in next box according to ketone level and inform Diabetes Team  
 ↓  
 Look for cause of high blood glucose and change cannula, tube and insulin cartridge

**Blood Ketones 1.0 – 2.9**

Eating	Not eating
↓	↓
<b>Extra insulin now</b> (see table below) + usual insulin for food given with <b>PEN</b> Change cannula, tubing and insulin cartridge	<b>Extra insulin now</b> (see table below) given with <b>PEN</b> Change cannula, tubing and insulin cartridge

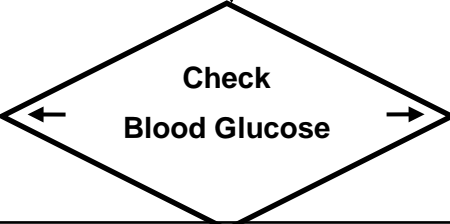
Extra insulin			
Weight (Kgs)	NovoRapid dose (units)	Weight (Kgs)	NovoRapid dose (units)
10	1	50	5
20	2	60	6
30	3	70	7
40	4	80	8

**Blood Ketones 3.0 or more**  
**Inform Diabetes Team**

Eating	Not eating
↓	↓
<b>Extra insulin now</b> (see table below) + usual insulin for food given with <b>PEN</b> Change cannula, tubing and insulin cartridge	<b>Extra insulin now</b> (see table below) given with <b>PEN</b> Change cannula, tubing and insulin cartridge

Extra insulin			
Weight (Kgs)	NovoRapid dose (units)	Weight (Kgs)	NovoRapid dose (units)
10	2	50	10
20	4	60	12
30	6	70	14
40	8	80	16

**Blood glucose less than 6**  
 ↓  
 Frequent small sugary drinks or Glucogel



**Blood glucose more than 6**  
 ↓  
 Frequent sugar-free drinks

Check blood ketones and glucose every 2 hours and repeat process until child is recovered

- Contact team if:**
- Increasingly unwell
  - Ketones more than 3 or persist for more than 6 hours
  - Vomits more than twice
  - You have to give a second extra dose of insulin
  - Unable to maintain blood glucose above 4
  - Worried for any reason

**Phone numbers**  
 0118 322 8922 (nurses)  
 After 8pm 0118 322 5111 and ask to bleep paediatric registrar