

Sick day rules for families of children and young people with type 1 diabetes

Managing your child's sick days

Sickness is unavoidable, and can make your child's diabetes more difficult to manage. Most illnesses cause higher blood glucose levels due to the body's stress response. During illness you will need frequent blood glucose monitoring and often more insulin than usual.

Sick Day Rules

- Never stop the insulin. Even if you are eating less than normal, your body will need some insulin to use the glucose and get rid of ketones.
- Check your blood glucose every 2 hours, even overnight.
- Check for blood ketones every 2 hours when unwell. Remember to check that you have ketone testing sticks which are in date!
- Give additional Novorapid every 2 hours when blood glucose is above target (see table).
- If ketones are present when blood glucose is low, these are "starvation ketones" which will respond to sugar-containing drinks.
- Keep well-hydrated (avoid carbonated drinks)
- Seek early advice from the diabetes team if you are worried. During working hours, contact one of the nurses via their mobile. Out of hours, contact the team via the Paediatric Diabetes On-Call mobile (available from hospital switchboard)
- Treat the current illness. Give paracetamol for a raised temperature and seek advice from the GP if needed.
- Remember that vomiting with high ketones, particularly if the blood glucose is also high, is a sign of Diabetic Ketoacidosis. Your child needs urgent medical assessment in the Emergency Department.

Pump patients

The same general principles apply for blood glucose and ketone testing, and fluid intake.

Give correction doses via an insulin pen if the blood ketone level is more than 0.6mmol/l. This will give the insulin the chance to start working whilst you check if there is a pump problem (occlusion, battery failure, disconnection etc).

If blood ketones are less than 0.6mmol/l you can give a correction dose via the pump and check for a pump problem. However, if there has been no response to this dose in an hour, repeat the correction dose using an insulin pen.

In an unwell child where you are needing to give frequent correction doses, consider using a temporary basal rate (TBR). A TBR of up to double the usual rate may be required. In illnesses with diarrhea/vomiting and hypoglycaemia, you may need to set a lower TBR.

Additional insulin required during illness if blood glucose level is high

Negative ketones <0.6mmol.l (Blood)	Small to moderate ketones 0.6 – 1.5mmol.l (Blood)	Moderate to large ketones >1.5mmol.l (Blood)
Take a correction dose (CD) to correct high blood glucose (BG) in addition to normal bolus for carbohydrates eaten	Give <ul style="list-style-type: none"> 10% of your total daily dose (TDD) of insulin as additional fast acting insulin OR 0.1 units/kg body weight as additional fast acting insulin 	Give <ul style="list-style-type: none"> 20% of your total daily dose (TDD) of insulin as additional fast acting insulin. OR 0.2 units/kg body weight as additional fast acting insulin
Then: <ul style="list-style-type: none"> Re-check BG and ketones in two hours 	Then: <ul style="list-style-type: none"> Monitor fluid intake and ensure you are drinking enough fluids to keep well-hydrated Re-check BG and ketones in two hours (See below) 	Then: <ul style="list-style-type: none"> Monitor fluid intake and ensure you are drinking enough fluids to keep well-hydrated Re-check BG & ketones in two hours (see below)
<p>If your BG is going down that is a good sign but monitor closely throughout the day.</p> <p>If BG is increasing but ketones less than 0.6mmol/l:</p> <ul style="list-style-type: none"> Take another correction dose using a pen <p>If ketones 0.5 – 1.5mmol/l, follow orange column advice</p> <p>If ketones >1.5mmol/l, follow the red column advice</p>	<p>If ketones negative follow green column advice</p> <p>If BG is increasing but ketones still 0.6 – 1.5mmol/l:</p> <ul style="list-style-type: none"> Continue to give 10% of TDD or 0.1 Units/kg as additional fast acting insulin every 2 hours using a pen Give usual boluses for food Re-check BG and ketones every 2 hours even through the night! <p>If ketones increase to >1.5mmol.l, follow the red column advice</p>	<p>If ketones negative follow green column advice</p> <p>If BG is increasing but ketones have reduced to 0.6 – 1.5mmol/l, follow orange column advice</p> <p>If ketones are still >1.5mmol.l:</p> <ul style="list-style-type: none"> Give another 20% TDD or 0.2units/kg as additional fast acting insulin every 2 hours using a pen Give usual boluses for food Once vomiting with high ketones, have a low threshold for admission to hospital

To calculate the total daily dose of insulin, add together all the basal insulin (total basal dose on a pump, dose of long-acting insulin if on injections) and the boluses during a day when the child is well. You may want to do this three times and take the average reading (total from day 1 + total from day 2 + total from day 3 = three day total. Three day total divided by three gives you average total daily dose).

This dose is the additional insulin you need to correct high blood glucose when your child is unwell. If your child is eating, you will need to calculate how much insulin they need to cover the carbohydrates in their meal too.

Useful Contacts

Paediatric Diabetes Specialist Nurses (Monday to Friday - 9.00am to 5.00pm)

Elaine Papps	07919 306001
Elaine Wrenn	07909 527397
Nicola Orr	07814 998550

Out of hours contact hospital switchboard and ask for the Paediatric Diabetes On-Call Team mobile.

Important information

This patient information is for guidance purposes only and is not provided to replace professional clinical advice from a qualified practitioner.

Your comments

We are always interested to hear your views about our leaflets. If you have any comments, please contact the Patient Experience Team – Tel: (01323) 417400 Ext: 5860 or by email at: esh-tr.patientexperience@nhs.net

Hand hygiene

The trust is committed to maintaining a clean, safe environment. Hand hygiene is very important in controlling infection. Alcohol gel is widely available at the patient bedside for staff use and at the entrance of each clinical area for visitors to clean their hands before and after entering.

Other formats

If you require any of the Trust leaflets in alternative formats, such as large print or alternative languages, please contact the Equality and Human Rights Department.

Tel: (01424) 755255 Ext: 2620

After reading this information are there any questions you would like to ask? Please list below and ask your nurse or doctor.

Reference

The Clinical Specialty/Unit that have agreed this patient information leaflet:
Paediatric Diabetes Team

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