High Blood Glucose Levels and Illness Management for Type 1 Diabetes

Blood Glucose ≥14mmol/L, or Blood Glucose 10-14mmol/L with associated dehydration or symptoms of illness
Test Blood Ketones

Ketones below 0.6mmol/L

Ketone Level Acceptable

Treat high blood glucose with usual correction dose

Continue monitoring blood glucose and ketones every 1-2 hours.

If not eating, replace food with small amounts of sugary fluids.

If eating, have insulin with food as usual and encourage frequent sips of sugar free fluids.

Treat illness as usual. Eg. Paracetamol, contact GP

Phone Diabetes team back if no improvement

Ketones 0.6-1.5mmol/L

Ketones over 1.5mmol/L

Ketone levels too high – Risk of DKA

Are there signs or symptoms of DKA? [See chart below]
(or already tried correction dose twice and not improving you will need a hospital assessment)

No

Need to reduce Blood Ketones to < 0.6mmol/L

More insulin than usual is required to correct hyperglycaemia when ketones are present

Please call Emergency advice Line or ward

Yes

NEEDS HOSPITAL ASSESSMENT

Please call Emergency advice Line

INSULIN PUMP USER

1. Advise immediate administration of rapid acting insulin by **S/C pen injection**

Blood Glucose ≥14mmol/l: - Dose calculation –
Either: a. 10% of Total Daily Dose **or**
20% of Total Daily Dose **if** ketones>1.5mmol/L
Or b. 0.1 units of insulin/kg of body weight

Blood Glucose 10-14mmol/l: - Dose calculation –
Either: a. 5% of Total Daily Dose or
10% of Total Daily Dose if ketones>1.5mmol/L
Or b. 0.05-0.1 units of insulin/kg of body weight

2. Ask carer to disconnect pump from child and do a pump self-check and re-prime infusion set to check pump is working
3. If the pump is working the cannula needs replacing
4. Change the reservoir as well if there are any uncertainties
5. Reconnect pump
6. Consider increasing temporary basal rate by 10-20% every 2 hrs

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Never stop taking insulin
Encourage frequent sips of sugar free fluid and replace food with small amounts of sugary fluid if not eating

Re-test Blood Glucose and Ketones in 1-2 hours.
Are there signs/symptoms of DKA? (see chart below)

Yes

No

After 2hrs:- Blood glucose > 10mmol/l
(If blood glucose ≤10mmol/l follow flow chart for Normal & low blood glucose with illness)

Ketones below 0.6mmol/L

Ketones above 0.6 mmol/l

Clinical Features of DKA

Polyuria, Polydipsia and Weight loss
Nausea and Vomiting
(Admit if vomited more than 2 times)
Abdominal pain
Shortness of breath/Rapid breathing
Altered conscious level
Dehydration

(See DKA Protocol on intranet)

Created by Leeds Paediatric Diabetes Team April 2016.