

Managing Illness in Children with Diabetes on Insulin Pumps

Key diabetes management principles when your child is unwell:

- More frequent blood glucose and ketone monitoring is required
 - Check glucose levels every 2-4 hours
 - Check ketone levels 4-6 hourly, particularly if vomiting
- When vomiting occurs, it should always be considered a sign of insulin deficiency and ketones (usually due to a blocked infusion set), until proven otherwise
- Drink more fluids to maintain hydration
 - If glucose level above 8mmol/L, drink water or sugar-free drinks
 - If glucose level below 8mmol/L, drink fluids containing carbohydrate
- Parents should always take over diabetes management/decision making when their child is unwell
- Treat the underlying illness

If blood glucose levels are very high (above 15mmol/L):

Illness usually causes high BGLs and can dramatically increase your insulin requirements. This is caused by the higher levels of stress hormones during illness, which make you resistant to insulin. This resistance can often last for several days after you have recovered.

High BGLs are managed by increasing your insulin doses:

- Giving more frequent corrections - corrections may be needed every 2 to 3 hours
- Using a temporary basal rate - start with 120 -150% for 4 hours, then review and adjust
- Drinking more fluids (water or low calorie drinks)

Always ask yourself could this be a set blockage and high ketones making me feel unwell?

High ketone levels cause nausea, vomiting and abdominal pain

Ketone levels will guide your management

- If ketones are below 0.5mmol/L use your pump for corrections
- If ketones are above 0.5mmol/L use a pen injection to correct the high blood glucose and change the set (using the doses on your
- Remember that the pump will not register the pen injection as active insulin, so do not give a pump correction for the next 2 hours or you may cause a hypo from an overdose of insulin

If blood glucose levels are low (below 4mmol/L):

Low glucose levels often occur in gastroenteritis, as food is not able to be absorbed normally

Low BGLs are managed by reducing insulin doses (never stop insulin completely):

- Using a temporary basal rate – start with an 80% temp basal for 4 hours, then review and adjust

- Your carb boluses may also need to be reduced – start with a 50% reduction, then review and adjust

Treat hypos in the usual way

If your child is vomiting and unable to tolerate hypo treatment by mouth – a **mini dose glucagon injection** at home may save you from coming into hospital. Call for advice, if you do not have the instructions at home

When to call the WCH Diabetes Team for help:

- Your child has persistent vomiting or is becoming more unwell
- Your child has blood ketones above 3mmol/L
- You are unable to keep blood glucose above 4mmol/l
- You need help working out how much insulin to give by injection
- You are worried, exhausted or just don't know what to do next
- Your child is very young

Monday- Friday 9am -5pm: Call Diabetes Centre on 8161 6402 to speak with your Diabetes Educator

After hours: Call WCH Switchboard 8161 7000 and ask for Diabetes Doctor on Call