

## General illness guidelines

### TOP RULES FOR MANAGING ILLNESS

- 1 NEVER STOP INSULIN
- 2 CHECK BLOOD GLUCOSE AND KETONE LEVELS REGULARLY
- 3 CONTINUE TO MONITOR KETONE LEVELS
- 4 MAINTAIN HYDRATION & GLUCOSE LEVELS
- 5 CONTACT YOUR HEALTHCARE TEAM FOR FURTHER ADVICE & SUPPORT



### Diabetes and illness

Every child becomes unwell some time in their life. Diabetes does not make someone more likely to become unwell but it can make controlling glucose levels more difficult. This can be worrying, but most people can be looked after at home, and you can always call for help if needed.

Medicines such as paracetamol (Calpol®) for high temperatures and discomfort during illness, and any other medication that may be prescribed are allowed to be taken if you have diabetes.

If there are signs of infection e.g. discharge from ears, redness, persistent coughs, high temperatures then a GP appointment may also be required.

If there is rapid deterioration they should be taken to the hospital Emergency Department immediately.

## Low blood glucose levels during illness

Causes: Most commonly diarrhoea and vomiting

Why: Diarrhoea and vomiting can affect the absorption of glucose from carbohydrate eaten

Action: Regular carbohydrate is required (see our guides for advice)

## High blood glucose levels during illness

Causes: Most commonly viral infections, bacterial infections, coughs and colds etc.

Why: The body needs more insulin during periods of stress

Action: Extra insulin is needed (see our guides for advice)

## Ketones

The body uses glucose (from the carbohydrate we eat) as its main source of energy. If there is not enough glucose or perhaps not enough insulin then the body will switch to using fat for energy, which produces ketones. This may happen during times of illness when insulin requirements increase and more energy is required to fight infection. It may also happen when not enough carbohydrate has been consumed (e.g. during illness when a child with diabetes may not be feeling like eating or drinking). These ketones are called “starvation ketones” and usually not a worry in relation to diabetes.

During illness, ketones may be produced when the blood glucose level is low, in target range or high. To reduce the risk of ketone production, enough carbohydrate needs to be eaten or drunk to keep blood glucose levels up, and regular insulin doses need to be maintained or possibly increased (more corrections if needed)

## Monitoring blood glucose and ketones during illness

During times of illness regular and more frequent blood glucose monitoring is required. If the blood glucose is 14mmol/l or above, blood ketones **must** be checked. This is essential due to the risk of ketones rising quickly during illness. Increased energy and insulin requirements and possibly lack of carbohydrate being consumed causes this.

A high blood glucose level of 14mmol/l or above and ketones of 1mmol/l (on injections) or 0.6mmol/l (on a pump) will require action (See our guides for advice).

If blood glucose levels are 13.9mmol/l or below, then ketones **do not** require to be checked.

## Using sensors during illness

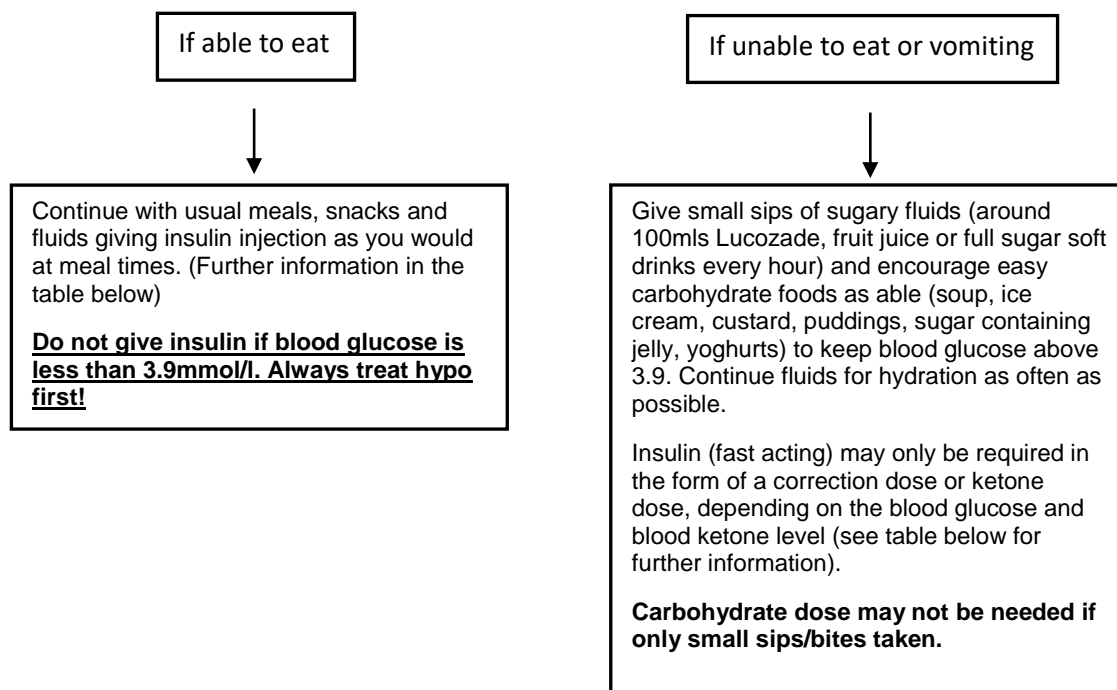
During times of illness the glucose levels can change rapidly and many children with diabetes and their families will find their sensor is not as accurate. If the glucose levels on the sensor are 14mmol/l or above then you should confirm this with a finger prick test, as well as carrying out a blood ketone test.

If the sensor is showing a low blood glucose level of 3.8mmol/l or less, a finger prick blood glucose check must be carried out to confirm or rule out hypoglycaemia. Ketones **do not** need to be tested if the blood glucose is low.

If the child with diabetes feels that their symptoms do not match the glucose readings on the sensor then using finger prick testing to confirm the blood glucose levels, is the “gold standard” and will remove any confusion over the best action to take.

## Insulin doses and carbohydrate intake during illness

During times of illness never stop insulin injections or disconnect the pump unless told to do so by health professional and continue to take carbohydrate as much as possible as it is important to maintain energy levels and prevent starvation ketones.



**A correction dose** is extra insulin which can be delivered when the blood glucose is high without ketones

**A ketone dose** is a dose of fast acting insulin to prevent further ketone production and is given when the blood glucose is 14mmol/l or above **and** ketone level is 1.0mmol/l (on injections) or 0.6mmol/l (on a pump) or above. This is given immediately as a ketone dose using the table on the back of your blood glucose diary (See our illness guidelines for more advice)

**NEVER GIVE A CORRECTION DOSE AND A KETONE DOSE TOGETHER.**