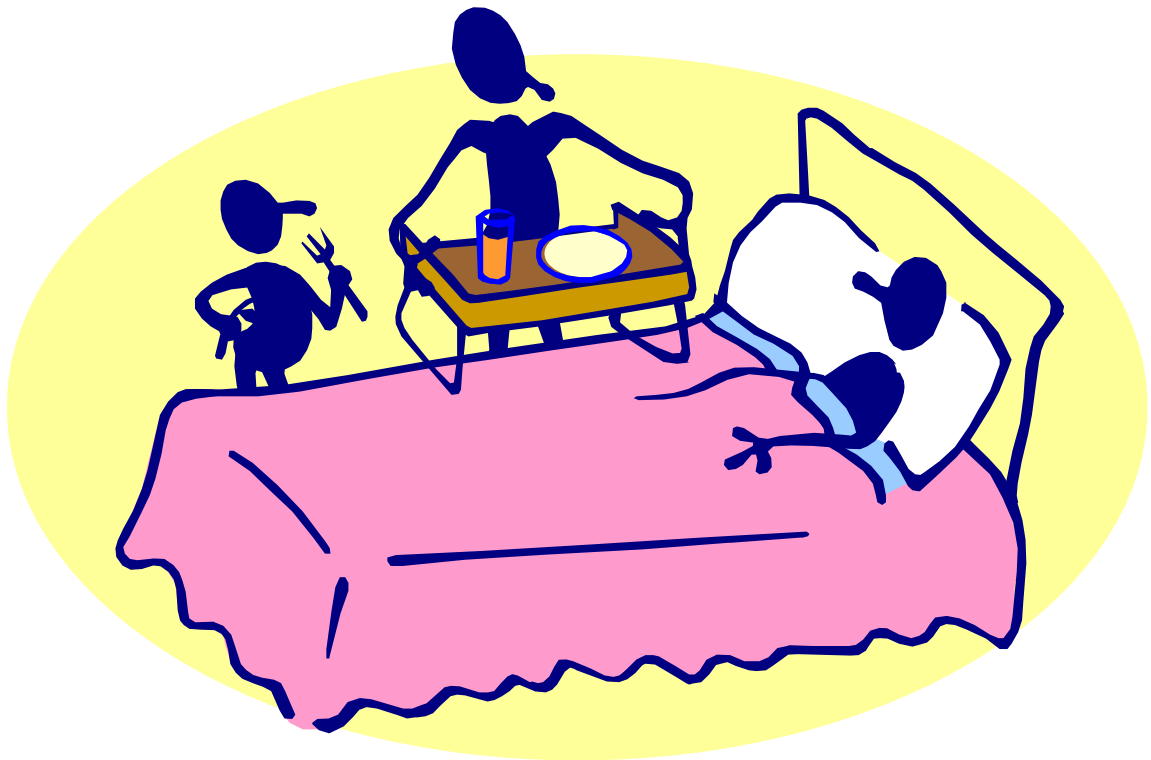


Illness

At some stage, most children will get colds, sore throats, viruses, tummy bugs and vomiting illnesses. There is no reason why a child with diabetes should become unwell any more often than a child without the condition, but having diabetes certainly won't prevent you from catching the usual childhood illnesses.

Illness will probably affect blood glucose results and your appetite. The body responds to the stress of illness by increasing the amount of glucose in the blood. The body's metabolic rate increases, and therefore so does its need for an adequate energy supply. Normally the pancreas gland would simply produce more insulin in this situation, but for someone with diabetes, they have to increase the insulin amount themselves, by injecting increased doses.



Without an increase in the amount of insulin injected during illness, the body will be unable to use carbohydrate properly, and so will start to use its alternative energy supply – fat. This only provides a short term solution, as the result of using fat as an energy source is that ketones are produced. These acids steadily poison the body, making the person with diabetes even more ill, and only insulin will halt this situation developing.

Care must be taken at a time of illness, however, as during a vomiting illness or if the child has diarrhoea, the blood glucose may fall, even as the body continues to produce ketones from the consumption of fat. In this situation, and at any time someone with diabetes becomes ill, it is essential to check blood glucose results frequently, and also to test the urine for ketones. Keep a record of these results and follow “The Sick Day Rules” advised by your team.

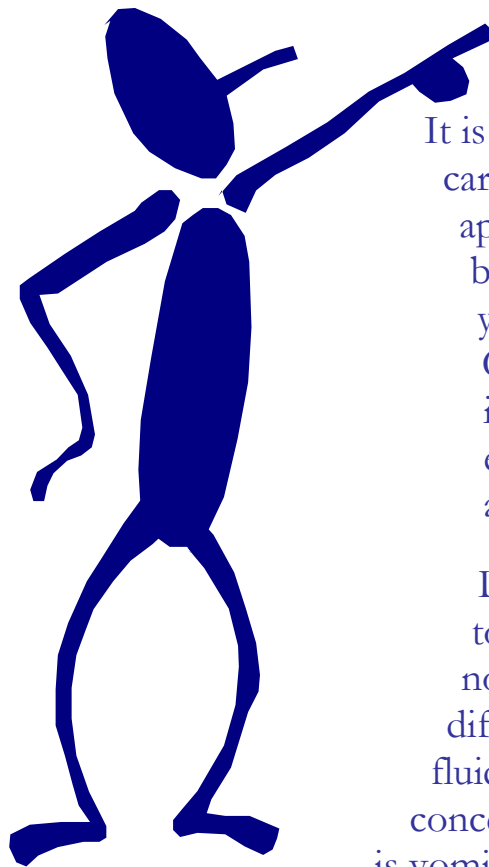
Seek advice from the Diabetes Team whenever you are uncertain or concerned in any way.

Do not wait for the Diabetes to get out of control.

What to do...

Remember the golden rule:

Never stop insulin AND Never stop carbohydrate



It is important to **always** have insulin and carbohydrate every day, even during illness when appetites are poor and even if you are on basal bolus insulin regimen. As mentioned above, you usually need **more** insulin during illness. Carbohydrate is needed to stop the body using its fat stores as a source of energy, and is essential to prevent the formation of ketone acids.

During minor illnesses, the usual diet may be tolerated but if the child feels unable to eat as normal, carbohydrate will need to be given in a different form – simple, sugary carbohydrates or fluids. A vomiting illness can be a real cause for concern. Contact your Diabetes Team if the child is vomiting to the extent that all fluids are being brought back.

Remember, always seek medical advice if you are in any way concerned.

Can't face food?

If usual foods cannot be eaten, replace the usual carbohydrate amount in the diet with sugary carbohydrates or fluids that will be more easily tolerated.

Here are some ideas for providing 10g portions of carbohydrate:

Items providing 10 g of Carbohydrate	Amount required
• Lucozade	50 mls/2oz
• Fruit juice -orange/apple	1/2 glass/100mls
• Coke-not diet	1/2 glass/100mls
• Other fizzy drinks	1 cup/150mls
• Milk	1 cup/ 200mls
• Glucose tablets	3 tablets
• Blackcurrant drink eg Ribena	1 tablespoon undiluted
• Ice lollies	Check label
• Ice cream	1 scoop
• Fruit yogurt- not diet	1/2 pot
• Sweetened milk pudding	2 oz
• Boiled sweets	2
• Thick soup	1 ladle
• Jelly (not sugar free)	3 level tablespoons
• Sugar, jam, honey or syrup	2 teaspoons

Tips

- **Sugary foods and drinks** may be necessary to ensure sufficient carbohydrate is taken.
- Many children **prefer to drink** than eat when unwell.
- If fluids are all that can be managed, sip them slowly throughout the day - **little and often** is best.
- Let the **gas go out of fizzy drinks** as it may upset the stomach further.
- Encourage **low calorie/sugar free drinks** including water, *in addition* to any fluids used to provide carbohydrates. This prevents dehydration, and will help to “flush out” ketones and excess sugar.
- **Never cut down on carbohydrate** but if you feel unable to eat your usual meals and snacks divide the total daily carbohydrate into 10g portions spread throughout the day.

How to look after diabetes when unwell

Every child will be unwell some time - it is unavoidable. During times of illness diabetes can become unstable, causing blood glucose to be high, low or both. This can be worrying, but with most people can be looked after at home, and you can always call for help if you need it.

Illness causing a low blood glucose

The most common problem causing low blood glucose is a diarrhoea and vomiting illness. Vomiting makes it difficult to keep down enough carbohydrate and diarrhoea can reduce absorption of food. Both can make it difficult for the blood glucose to stay at a reasonable amount.

Someone in this situation will already have a falling blood glucose, and will probably not feel like eating or drinking properly to increase the blood glucose again. It is often difficult to take the usual meals and snacks, but the same amount of carbohydrate might be taken in a simpler, more easily absorbed form. For example, jelly with sugar in it might be more easily swallowed and kept down than a sandwich or some pasta. The blood glucose will also increase more quickly.

Even if not well enough to eat, children can often take fluids. A day's carbohydrate can be given as sugary drinks, such as Lucozade (50 ml hourly), non-diet soft drinks (100 ml hourly), or original Ribena™ (1 tablespoon diluted in water), and so on. If a child is vomiting or has diarrhoea, it is important to give enough fluid to prevent dehydration, so non-sugary drinks should also be frequently offered. Something light such as a slice of toast or a dry biscuit could be tried if the child is hungry. See [Pages 50-52 in the "Food for Life" diet book](#) for ideas on giving carbohydrate when ill.

A person with diabetes should **never stop insulin** or carbohydrate during health or illness!

The body makes ketones when there is too little insulin available for its needs, and **not** because of high blood glucose results. This means that ketones may occur even when the blood glucose is normal or low. To prevent hypoglycaemia, and to allow enough insulin to be given to prevent ketone production, enough carbohydrate must be taken. **Never stop insulin, and never stop carbohydrate.**

Illness causing a high blood glucose

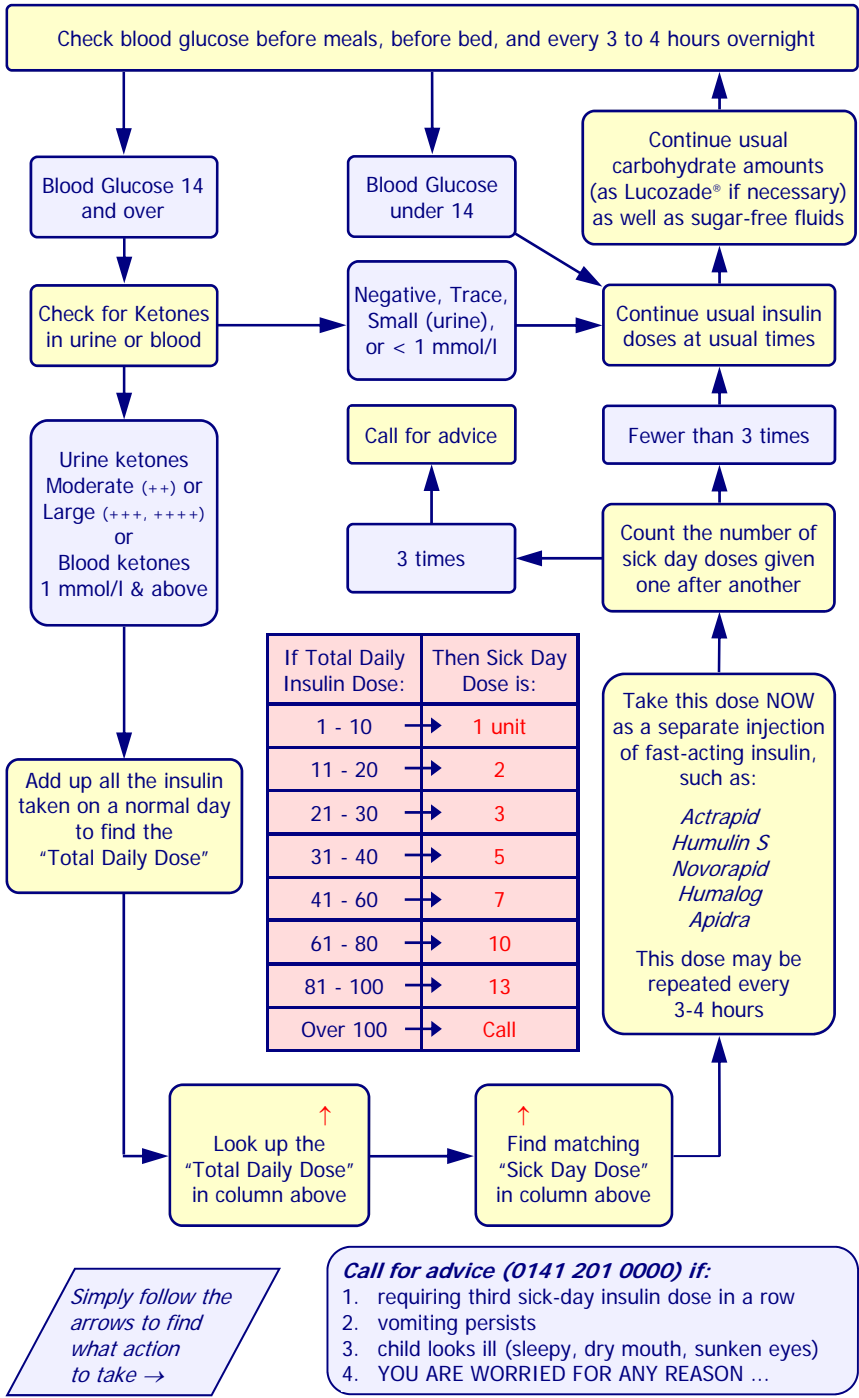
Illness may have no impact on diabetes at all. On the other hand, a sore throat or a chest infection might cause problems with high blood glucose results because the body needs *more* insulin when it is ill. The pancreas would normally just make more insulin, but when someone has injected insulin, they must increase the doses taken.

It is very important to look for ketones when someone with diabetes is not well, or whenever the blood glucose result is over 14 mmol/l. The urine can be tested, and some meters will also directly measure ketones in the blood. If an increase in ketones is found, this shows that the body urgently needs more insulin. The guidelines on the next page must be followed closely, or the situation can become very serious.

See Also: **Sick Day Guidelines** (Page G 05), **Illness, Insulin & Ketones** (Page I 24), and **"Food for Life"** dietary companion guide to this Record

What to do when unwell or blood glucose over 14

Start



Guidelines

! For more on ketones and illness, see page 124 in the Information section