Managing your insulin doses during illness if you have type 1 or type 2 diabetes

Blood glucose less than 11 mmol/L
Take your insulin as normal. Take carbohydrates as a meal replacement and sip sugar-free liquids (at least 100 mL/hour if you are able)

Blood glucose more than 11 mmol/L
Test blood glucose

Blood glucose more than 11 mmol/L and either no ketones or trace urine ketones (less than 1.5 mmol/L on blood ketone meter)
Take carbohydrates as a meal replacement and sip sugar-free liquids (at least 100 mL/hour if you are able)

Blood glucose more than 11 mmol/L and ketones present (more than 1.5 mmol/L on blood ketone meter or ++/+ on urine ketones)
Urine ketones + to ++ (1.5–3 mmol/L on blood ketone meter)
Urine ketones +++ to ++++ (more than 3 mmol/L on blood ketone meter)

Blood glucose more than 11 mmol/L and ketones present (more than 1.5 mmol/L on blood ketone meter or ++/+ on urine ketones)

Blood glucose less than 11 mmol/L and no ketones

Blood glucose less than 11 mmol/L
Test blood glucose level every 4 hours

Blood glucose more than 11 mmol/L
Test blood glucose level and blood/urine ketones every 4 hours

Blood glucose less than 11 mmol/L
Test blood glucose level and blood/urine ketones every 2 hours

Blood glucose more than 11 mmol/L and ketones present?

Test blood glucose level and blood/urine ketones every 2 hours

Blood glucose more than 11 mmol/L and ketones present?

Blood glucose less than 11 mmol/L
As your illness resolves, adjust your insulin dose back to normal

If you start vomiting, are unable to keep fluids down or are unable to control your blood glucose or ketone levels, you must seek urgent medical advice.

DO NOT STOP TAKING YOUR INSULIN EVEN IF YOU ARE NOT ABLE TO EAT.

**Type 2 diabetes?**

Feeling unwell?

**Type 1 diabetes?**

Understanding Diabetes

What to do when you are ill

- How illness affects your blood glucose levels
- Monitoring your diabetes
- Managing your medication
- What to eat and drink
- When to seek help

This leaflet was generated independently by TREND UK in conjunction with SB Communications Group. The BMS/AZ Alliance has supported the printing and distribution of this leaflet with no input to the content.
How does illness affect your blood glucose?

- When you are ill, or have an infection or a virus such as a cold, your blood glucose levels may rise in response to this, even if you are not eating.
- This may make you feel thirsty and pass urine more frequently, which can make you dehydrated. You may therefore need to increase the dose of your diabetes medication to combat this.
- If you have type 1 diabetes, your body can produce a substance called ketones when you are unwell, which can cause a serious condition called diabetic ketoacidosis.
- It is possible to manage your diabetes during illness effectively and keep your blood glucose levels down by following the simple advice given in this leaflet.

**DO NOT STOP TAKING YOUR INSULIN**

General guidance for people with diabetes

- Try to drink at least 4 to 6 pints (2.5 to 3.5 L) of sugar-free fluid in 24 hours to prevent becoming dehydrated.
- Avoid strenuous exercise.
- Treat symptoms such as a high temperature or a cough with basic medicines such as painkillers and cough medicines. These do not have to be sugar-free varieties, as they are taken in small quantities.
- See your GP if you think you have an infection, as you may need antibiotics.
- Test your blood or urine glucose levels, checking them at least four times a day.
- If you are on insulin and have been taught how to adjust, increase or decrease your doses accordingly, see the flowchart on the back page.
- Seek medical help if your readings remain higher than usual, you feel unwell and you are not sure what to do.
- **STOP TAKING YOUR INSULIN**

Meal replacement suggestions

Try to eat as normal but if you cannot manage your usual meals, replace these with light and easily digested foods such as soups and milky puddings. See the table below for a list of alternative food options.

<table>
<thead>
<tr>
<th>Type of food alternative</th>
<th>Amount</th>
<th>(Each serving provides approximately 10 g of carbohydrate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lucozade® Energy</td>
<td>50 mL</td>
<td>2 fl oz (¼ glass)</td>
</tr>
<tr>
<td>Fruit juice*</td>
<td>100 mL</td>
<td>4 fl oz (½ glass)</td>
</tr>
<tr>
<td>Cola (NOT diet)*</td>
<td>100 mL</td>
<td>4 fl oz (½ glass)</td>
</tr>
<tr>
<td>Lemonade (NOT diet)*</td>
<td>150–200 mL</td>
<td>5–7 fl oz (¼–1 glass)</td>
</tr>
<tr>
<td>Milk</td>
<td>200 mL</td>
<td>7 fl oz (1 glass)</td>
</tr>
<tr>
<td>Soup*</td>
<td>200 mL</td>
<td>7 fl oz (1 mug)</td>
</tr>
<tr>
<td>Ice cream*</td>
<td>50 g</td>
<td>2 oz (1 large scoop)</td>
</tr>
<tr>
<td>Complan®</td>
<td>–</td>
<td>3 level teaspoons (as a drink)</td>
</tr>
<tr>
<td>Drinking chocolate*</td>
<td>–</td>
<td>2 level teaspoons (as a drink)</td>
</tr>
<tr>
<td>Ovaltine® or Horlicks®</td>
<td>–</td>
<td>2 level teaspoons (as a drink)</td>
</tr>
</tbody>
</table>

*Sugar quantities may vary according to brand.

Keep sugary drinks at home for emergencies.

Contact your GP or Diabetes Nurse if you are not sure how to do this.

Managing your diabetes medication

If you have type 2 diabetes and are taking diabetes medication:

- Continue to take your tablets even if you are not eating.
- If you are taking metformin and you are vomiting or have diarrhoea, you should stop this medication.
- You may need to increase the dose of your tablets or even need insulin injections for a short time while you are ill.
- Contact your GP if you are able to check your blood glucose levels and find they are constantly higher than 15 mmol/L.
- If you develop abdominal pain, nausea and vomiting, stop the medication immediately and seek medical attention.

Call your GP, diabetes specialist nurse or healthcare professional for immediate help:

- If you are pregnant.
- If you have a child or are the carer of a child with diabetes.
- If you have type 1 diabetes and cannot keep fluids down.
- If you have type 1 diabetes, have positive ketones and don’t know how to adjust your insulin to manage these.
- If, despite the advice in this leaflet, your symptoms are getting worse.

Further information

- Diabetes UK Careline: 0845 120 2960
- Diabetes UK: www.diabetes.org.uk

References