Sick day management for adults with Type 1 diabetes

**IMPORTANT!**
1. NEVER stop taking insulin both background and quick acting insulin
2. Check blood ketone levels
3. Blood glucose (BG) levels must be confirmed with a finger prick check every 1-2 hours
4. Always repeat BG and ketone levels check 2 hours after giving insulin
5. Seek advice early if you are concerned

**Drink plenty of fluids:** 100-200ml every hour while awake and when doing blood glucose checks at night (every 2 - 4 hours)

**Seek advice (contact below)** if frequent hypoglycaemia, or hypo treatment not tolerated e.g. due to frequent vomiting

**Contact your GP or pharmacist** to treat underlying illness

---

**Blood Glucose 4-10 mmol/l**
- **Acceptable ketone levels** (less than 0.6 mmol/l)
  - Normal correction dose PLUS insulin for carbohydrate if eating

**Blood Glucose 10-14 mmol/l**
- **Acceptable ketone levels** (less than 0.6 mmol/l)
  - Normal correction dose PLUS insulin for carbohydrate if eating

**Blood Glucose above 14 mmol/l**
- **Acceptable ketone levels** (less than 0.6 mmol/l)
  - Normal correction dose PLUS insulin for carbohydrate if eating

If BG reading ‘HI’ on meter, assume 30mmol/l

- If repeated correction, consider adding 20-25% of quick acting insulin to bolus calculations
- Pumps: Temporary basal setting +30 to 50%

**Moderate ketone levels (0.6-1.4 mmol/l)** or **High ketone levels (1.5 mmol/l or above)**
- Normal correction dose PLUS insulin for carbohydrate
- **Take food or drink high in carbohydrate to help stop ketone production**

**Moderate ketone levels (0.6-1.4 mmol/l)**
- DOUBLE correction dose PLUS insulin for carbohydrate if eating

**High ketone levels (1.5 mmol/l or above)**
- DOUBLE correction dose PLUS insulin for carbohydrate if eating

**Contact Adult Diabetes Team**
- if blood glucose and blood ketone levels remain high

---

**Pump Users:** Use pen injection, change insulin and cannula.

---

**CONTACT DETAILS**
- Mon-Fri 8.30-17.00: Adult diabetes team office 01225 824173/825976/821037
- Out-of-hours: call 111 service
- In an emergency you may need to call an ambulance e.g. if acute signs of DKA

Date of publication: Nov 2019. Ref: PD/SDM © Royal United Hospitals Bath NHS Foundation Trust

Icons from www.flaticon.com
Sick day management for adults with Type 1 diabetes

Always look out for signs of Diabetic Ketoacidosis (DKA): vomiting, abdominal pain, heavy laboured breathing, panting or feeling drowsy. If any of these are present with high ketone levels, RING 999 for urgent hospital care.

Raised blood ketone levels explained

Raised blood ketones with blood glucose BELOW 10mmol/l
If you have an illness that makes it difficult to eat e.g. a stomach upset or gastroenteritis the body may produce ketones. This is because when you don’t eat the body produces ketones for energy; these are called ‘starvation ketones’. To help stop making these ketones, have food or drink high in carbohydrate, e.g. toast, crackers, full sugar jelly or sips of Ribena, with insulin. Aim for 10-15g carbohydrate every 1-2 hours.

Raised blood ketones with blood glucose ABOVE 10mmol/l
When the blood glucose is above 10mmol/l, we have to assume that the ketones are not ‘starvation ketones’, but due to levels of insulin being too low. In this case, double correction doses are needed to clear the ketones.

How to check for blood ketones?
1. Check you are using the correct strip in PINK wrapper
2. Insert the strip (piano keys end) into the meter. This will turn the meter on
3. KET will appear on the screen
4. Apply blood when blood drop symbols appears
5. Hold blood to strip until 3 lines appear
6. Results will appear after 10 seconds

Preventing dehydration

More frequent drinks of water and other sugar-free drinks will help to flush the ketones out and prevent dehydration. Aim 100-200ml every hour. If vomiting or diarrhoea, include some fluids with salt in them e.g. soup, sports drinks with electrolytes or Dioralyte®.

Sick Day Box  Examples of high carbohydrate food & drinks. Remember to store with extra supplies of blood glucose and ketone strips

Date of publication: Nov 2019. Ref: PD/SDM © Royal United Hospitals Bath NHS Foundation Trust