

## Top tips:

- Levemir insulin needs to be given approximately every 12 hours to provide full background cover.
- Do a 2 unit 'air shot' vertically into the air before each insulin pen injection to make sure that the needle is working and expel any air bubbles (repeat if required).
- Move injection sites to avoid getting lumpy sites.
- Practice giving an injection at least once a month when your pump is working well so that if you do encounter a problem and your pump fails, you can use your pens confidently and keep yourself safe.
- When returning to insulin pump therapy start this in the morning so you can make sure the pump is working

## Contact details for more information

### Monday to Friday 9am-5pm

- Diabetes doctors can be reached via the paediatric secretaries on **01952 641222**, ext. **5980** or **5981**
- Diabetes nurses on **01743 450855 option 2**, text via **ChatHealth 07312 263102** or email **Shropcom.pdsn@nhs.net**
- Diabetes Dietician on **01952 641222** extension **4874**

### In an emergency/out of hours

In an emergency during working hours when you cannot reach one of the team above or for out of hours support i.e. after 5pm or at weekends.

All patients requiring advice should contact the Princess Royal Hospital switchboard on **01952 641222** and ask to speak to the paediatric registrar for diabetes advice.

# Managing Type 1 Diabetes

## Pump malfunction/failure



## Reverting from Insulin Pump Therapy to Multiple Daily Injections

### How to stay safe:

If your pump malfunctions or fails you will need to revert to insulin injections until you get a replacement pump.

- You always need to have supplies of your insulin pen devices, insulin pen needles & insulin cartridges available (both rapid acting insulin & Levemir insulin). Your GP should provide these on your repeat prescription, always check expiry date
- Remember to take these supplies on holiday with you too.
- Keep a written record of your pump settings as a precaution. You can also use a recent pump download to find your pump settings. You can find this information as follows:
  - ⇒ Diasend.com – click ‘compilation’ tab and scroll down to ‘insulin’ section where you can see ‘insulin doses summary’ table.
  - ⇒ Carelink – click ‘reports’ and choose ‘device settings snapshot’.

### How much insulin to give by pen injection?

#### Background insulin (Levemir®)

This is not required if you can guarantee receiving your replacement pump within 4 hours of disconnection.

If you have used Tresiba or Lantus in the past you cannot use Tresiba or Lantus as an emergency insulin, because it takes too long to get into and then out of your system. Therefore you need to have a supply of Levemir insulin.

### Calculating your background insulin dose

Find out how many units your usual total basal insulin is. This is in your pump (if you are still able to get information from it), or it's available on the latest download on diasend.com / myglooko.com / or carelink.

The Levemir® dose you require is your total basal insulin dose when using the pump, plus 10%, divided by two and rounded to the closest half unit and delivered twice a day, 12 hours apart.

If you know you that a replacement pump will take more than 4 hours to reach you, start taking the Levemir® insulin straight away and continue to give every 12 hours until your new pump is delivered and set up for you to use.

When you go back onto your pump, you may need to set a temporary basal rate reduction, so monitor your glucose levels carefully and phone your diabetes team if you need any advice.

### Rapid insulin for correction and carbohydrates

Monitor your glucose regularly to check whether adjustments to your insulin doses are needed. You may need a ‘correction dose’ of rapid acting insulin immediately, if the pump has not been working for some time.

Give rapid acting insulin (Novorapid®/Humalog®/Apidra®/Fiasp) at meal and snack times using your normal insulin to carbohydrate ratios (ICR), and additional correction doses as needed using your normal insulin sensitivity factor (ISF). Remember to allow 2 hours for any rapid acting insulin doses to work, before giving more. Both ICR and ISF amounts can be found in your pump or on your last pump download on Diasend.com / Myglooko.com / or Carelink.