

## Converting from insulin pump therapy back to multiple daily injections

### Introduction

Sometimes you may need to go back onto insulin injections. This may be due to a pump failure or for going on holiday. To go back onto insulin injections you will need to calculate a background insulin dose to replace the pump basal rate and use your insulin to carbohydrate ratios and insulin sensitivity factor to calculate bolus insulin injections.

### It is very important that;

- You keep a written record of your pump doses including your average total daily dose and the total daily basal insulin dose.
- You know your insulin sensitivity factors, i.e. how much insulin is required to correct high blood glucose levels
- You know your insulin carbohydrate ratios, i.e. how much insulin is required for carbohydrate foods

### How to calculate your long acting insulin dose;

1. Find the total daily basal dose of insulin from the memory of the pump or your written records.
2. Add 10% to the total daily basal dose, and this will be the basal/background insulin dose, e.g. Levemir or Lantus

### Example:

Current total daily basal insulin dose = 15units

Insulin sensitivity factor = 1 unit to lower blood glucose by 3.3 mmols/L

Insulin carbohydrate ratio = 1 unit to 10g carbohydrate, with breakfast and 1 unit to 12g at other meals.

1. Average daily pump basal insulin dose is 15 units
2. Calculate 10% of the basal insulin dose – this is 1.5units
3. Add 10% onto the pump basal dose: 15 units + 1.5 units = 16.6 units of Levemir® or Lantus®

For all food and correction doses give rapid acting insulin (Humalog® or Novorapid®, Apidra®) using your insulin to carbohydrate ratio and insulin sensitivity factor.

This formula will provide you with a starting background insulin dose, you will need to check blood glucose levels and adjust insulin doses as needed.

Remember;

You need a supply of rapid acting and long acting insulin and insulin pens.

Check the insulin expiry dates regularly.

Keep a record of total insulin doses, each time any changes are made, update your records.

### **Who to contact for further help or advice**

If you need urgent advice about diabetes management Monday – Friday 9am – 5pm call 0151 252 5766. For out of hours advice call the hospital switchboard on 0151 228 4811 and ask for diabetes on call.

Always contact the insulin pump company in the event of pump failure.

For non urgent advice contact your diabetes nurse on the usual numbers or email [diabetes@alderhey.nhs.uk](mailto:diabetes@alderhey.nhs.uk)

This information can be made available in other languages and formats if requested.

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Diabetes Fact Sheet – Pump to Pen

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