

**Patient  
Information**

# Testing basal rates with your insulin pump

## Introduction

This leaflet gives you information about managing your basal rate with an insulin pump. One of the key advantages of continuous insulin therapy is that you are able to tailor your basal rates in ways not possible with insulin injections.

## Testing your basal rate

You should test your basal rates by fasting with every season change or every 3 months and before your hospital appointments. Choose the time of day that best suits your needs:

- Overnight
- Morning
- Afternoon
- Evening

You might find it easier to test basal rates in sections of the day rather than testing for the whole day. Remember, optimising your basal rates is key to optimising your pump. Be patient as it may take a few attempts at testing your basal rates and changing them until you get it right.

## Key points

- During periods of fasting you need to avoid eating carbohydrate containing meals/snacks. You will not need to take any bolus insulin.
- Try not to eat meals high in fat before you start to fast as this will have an extended effect on your blood glucose level.
- Aim to keep all blood glucose levels within your personal target range; they should remain stable (within 1-2mmol/L if your basal insulin is correct).
- Test your blood glucose level 2 hourly during your fast.
- Choose a time when your blood glucose level is within target before testing fasting basal rates, but not as a result of a correction dose.

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Department

**Diabetes**

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- If a correction dose is needed you should check your blood glucose after 2 hours. If levels are within your target range start fasting and testing blood glucose every 2 hours.
- No strenuous exercise to be taken over the 24 hours before the test.
- Do not test basal rates if you have an infection or feel unwell.
- Abandon the fast if you experience a hypo or develop ketones.
- If you need to make changes adjust the basal rates 2 hours prior to the blood glucose level that is out of target. You can change it by 0.1 to start with.
- If basal rates remain out of target following basal rate adjustment, fast once again and alter rates accordingly if necessary.

Once you think your basal rates are correct you can start to look at the pattern of blood glucose 2 to 4 hours after eating carbohydrate to see how well your ratio is working.

- If your blood glucose level does not rise more than 1.1mmol/L, the insulin to carbohydrate ratio may not be correct. We would advise you to increase your carbohydrate ratio, this way it will offer you less insulin.
- If your blood glucose level rises above 2.8mmol/L, the insulin to carbohydrate ratio may not be correct. We advise that you reduce your carbohydrate ratio, this will offer you more insulin.

## Contact information

If you need further advice, please speak to a member of your Insulin Pump Therapy Team by contacting the office below.

### Diabetes Specialist Nurse Office

Tel: 0300 422 8613 answer phone

Tel: 0300 422 4266 answer phone

We will do our best to respond to messages within 72 hours. Please note this is not an urgent helpline.

### Diabetes Specialist Nurse

Email: [ghn-tr.diabetesnurses@nhs.net](mailto:ghn-tr.diabetesnurses@nhs.net)

### Diabetes Dietitians

Email: [ghn-tr.diet.diabetes@nhs.net](mailto:ghn-tr.diet.diabetes@nhs.net)

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