

## Patient information

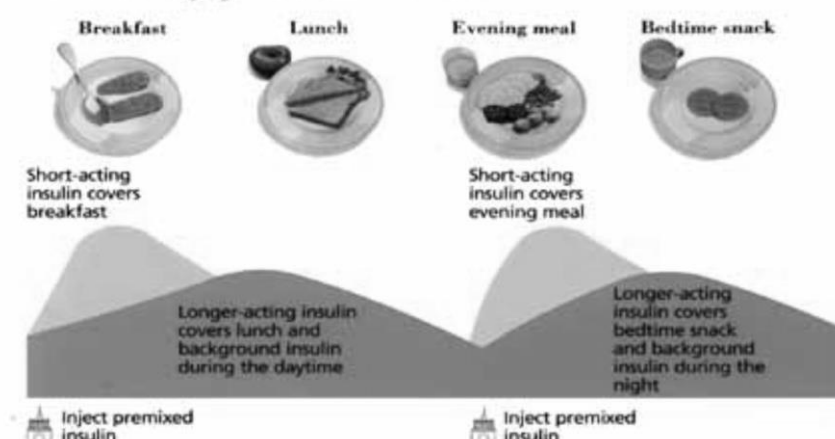
### Insulin Titration for People on a Twice Daily Insulin Regime

Diabetes and Endocrinology Department

#### How does insulin work?

It is important to know how your insulin works in order to know how to adjust it to improve your diabetes control.

#### Twice daily premixed insulin



The picture above demonstrates how your insulin works. Your insulin is a mixture of two different insulins; one fast acting and the other slower acting. Your insulin is injected twice a day before breakfast and again before evening meal.

The fast acting insulin will begin to work within five to 30 minutes and will last between four to six hours, depending on what insulin you take.

The slower acting insulin will begin to work strongly after approximately four hours and will last up to about 16 hours:

- The breakfast insulin controls the blood glucose level before lunch and the blood glucose level before evening meal.
- Your evening meal insulin controls the blood glucose level before supper and the glucose level over night and in the morning.

In brief, it is the insulin taken prior to testing your blood that controls that blood glucose level.

You should aim for blood glucose of between four and seven before meals.

## How do I adjust my insulin dose?

	Before breakfast	Before lunch	Before evening meal	Before supper
Mon	7.8	6.7	10.0	7.8
Tue	8.1	9.8	9.1	8.0
Wed	9.0	8.0	8.8	7.6
Thu	7.2	8.1	9.4	7.8
Fri	8.8	7.5	11.8	8.1
Sat	8.7	7.1	9.9	8.9
Sun	10.0	7.0	7.9	9.1

In the above example the blood glucose levels prior to lunch and evening meal are the highest. Therefore, the insulin taken prior to this (breakfast time) should be increased by two units.

Then test mainly before lunch and evening meal and continue to increase the breakfast time insulin until the blood glucose levels are in target (between four to seven). Dose adjustments should be made no more than twice a week.

When you have done the above, you should test your pre meal blood glucose levels throughout the day again for five to seven days and identify the highest column of blood glucose readings once again.

When adjusting your insulin dose we would always recommend that you:

- only adjust one insulin at a time.
- look for trends or patterns before adjusting insulin.
- never adjust your insulin after one raised or low blood glucose reading.
- adjust your insulin by two units at a time, unless advised otherwise by your diabetes team.

## How often should I review my blood glucose results?

Once you have titrated your insulin doses and all your blood glucose levels are mainly within target. You should review your blood glucose readings every week and adjust any insulin doses if needed.

If you are concerned about your blood glucose levels and are unable to bring them to within target. You should contact either your family doctor (GP), Practice Nurse or Diabetes Specialist Nurse.

## **Feedback**

Your feedback is important to us and helps us influence care in the future.

Following your discharge from hospital or attendance at your outpatient appointment you will receive a text asking if you would recommend our service to others. Please take the time to text back, you will not be charged for the text and can opt out at any point. Your co-operation is greatly appreciated.

## **Further Information**

### **The Diabetes Centre**

**Telephone: 0151 706 2829**

**Text phone number: 18001 0151 706 2829**

**NHS 111**

**Tel: 111**

### **Diabetes UK**

**10 Parkway**

**London**

**NW1 7AA**

**Website [www.diabetes.org.uk](http://www.diabetes.org.uk)**

### **The North West Diabetes UK**

**First floor**

**The Boultings**

**Winwick Street**

**Warrington**

**WA2 7TT.**

**Telephone: 01925 653 281**

**e-mail [n.west@diabetes.org.uk](mailto:n.west@diabetes.org.uk)**

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