

# a guide to **BASAL BOLUS** insulin therapy

Novo Nordisk Customer Care  
**0845 600 5055**

Calls charged at local rate.  
Calls may be recorded for training purposes.  
(Office hours 8.30am - 5.30pm)



For more information on diabetes visit our website  
where Novo Nordisk booklets are available  
in a downloadable format:

[www.changingdiabetes.co.uk](http://www.changingdiabetes.co.uk)

# DAWN

Diabetes Attitudes Wishes & Needs

This booklet was provided as a service to patients by:  
Novo Nordisk Limited, Broadfield Park, Brighton Road,  
Crawley, West Sussex RH11 9RT.



**Levemir**<sup>®</sup>  
(insulin detemir)

**NovoRapid**<sup>®</sup>  
(insulin aspart)

Novo Nordisk patient information  
is specifically designed to benefit  
people currently using Novo Nordisk  
insulin and devices



## Why this booklet?

You have been prescribed NovoRapid® and Levemir® for your basal-bolus therapy.

This booklet provides a quick guide to help people with diabetes understand the basal-bolus injection routine.

Basal-bolus therapy allows you to match the time and amount of insulin you inject closely to when and how much food you eat. This gives you the freedom to change your meal times and occasionally enjoy a bigger, or smaller, meal than usual without upsetting your blood glucose control.



## Contents

|   |    |
|---|----|
| <b>What is insulin?</b>                               | 4  |
| <b>What type of insulin to inject and when?</b>       | 5  |
| <b>Your basal-bolus regimen</b>                       | 7  |
| <b>How to inject NovoRapid® and Levemir®</b>          | 8  |
| <b>Do I always inject the same amount of insulin?</b> | 9  |
| <b>Changing meal times</b>                            | 10 |
| <b>Storing my Levemir® and NovoRapid®</b>             | 11 |

**Levemir®**  
(insulin detemir)

**NovoRapid®**  
(insulin aspart)

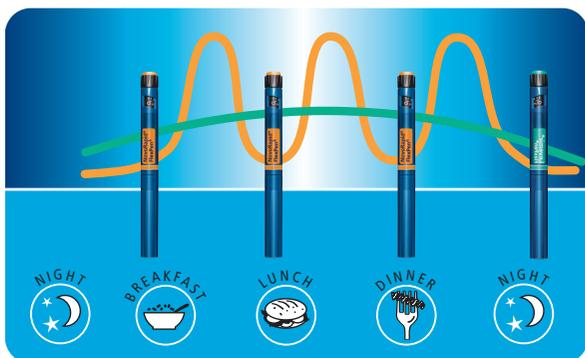
## What is insulin?

Insulin is very important for everyone. It helps sugar move from the bloodstream into parts of your body that need it to make energy. By doing this, insulin controls the glucose (or sugar) level in your blood.

Everyone needs a background insulin level and extra mealtime insulin to control blood glucose levels.

### What is basal-bolus therapy?

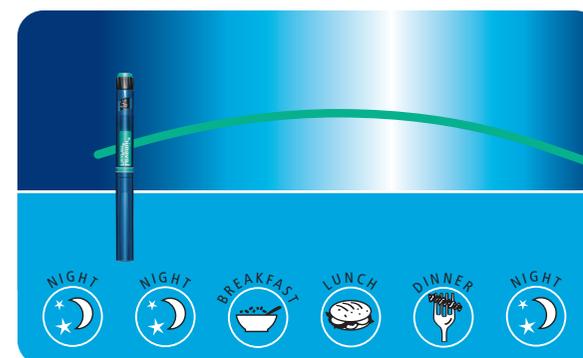
- If you have diabetes, you make very little or no insulin, or your body may not use available insulin properly.
- The purpose of basal-bolus insulin therapy for people with diabetes is to copy the body's normal production of insulin as closely as possible.
- Therefore you must inject a background (basal) level of insulin and an extra boost of insulin with each meal.



## What type of insulin to inject and when?

### Long-lasting basal insulin (background insulin)

- Our bodies need a low background level of insulin during the night and throughout the day. This is called 'basal' insulin. It lasts for a long time and controls your blood glucose at times when you are not eating but your body still needs energy.
- Levemir® is your basal (background) insulin that will last up to 24 hours. Levemir® absorbs slowly into your body to prevent your blood glucose from rising too high in between meals and while you are asleep at night.
- Levemir® is usually taken in the evening or at bedtime, but may also be given in the morning as well if your doctor or diabetes nurse feels you need some extra cover.
- If your doctor or diabetes nurse feels you need some extra cover through the day, they may tell you to inject Levemir® in the morning as well. But only do this if you have been told to.
- Your doctor or diabetes nurse may also recommend that you have a small snack before you go to bed.

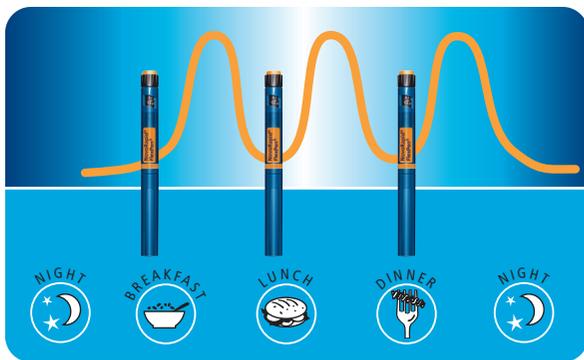


## ● What type of insulin to inject and when?

### What is bolus (mealtime) insulin?

When you eat a meal your blood glucose level goes up as food is turned into sugar. You need more insulin to cope with the rise in glucose after meals. This is called 'bolus' insulin. It works quickly and controls your blood glucose after your meals.

- NovoRapid® is your rapid-acting meal time insulin.
- In order to cover the rising blood glucose levels after each meal, NovoRapid® is normally injected just before you eat breakfast, lunch and dinner. Your doctor or diabetes nurse will advise you on this.



## ● Your basal-bolus regimen

As you're starting on a basal-bolus insulin injection regimen, you need to inject two different types of insulin. You also need to know what time to inject each one.

### When do I need to take my insulin?

| Levemir®          |              |
|-------------------|--------------|
| Time of injection | Dose         |
| PM                | <b>BASAL</b> |
| (AM)              |              |

| NovoRapid®        |                   |
|-------------------|-------------------|
| Time of injection | Dose              |
| Meal 1:           | <b>MEAL TIMES</b> |
| Meal 2:           |                   |
| Meal 3:           |                   |
| (Meal 4):         |                   |

**Levemir®**  
(insulin detemir)

**NovoRapid®**  
(insulin aspart)

## ● How to inject NovoRapid® and Levemir®

NovoRapid® and Levemir® are available in FlexPen® which is pre-filled with insulin.

NovoRapid® and Levemir® are also available as Penfill® cartridges which fit into NovoPen® 3 and other Novo Nordisk injection devices.

Your doctor or diabetes nurse will help you decide which regime is right for you.



## ● Do I always inject the same amount of insulin?

- The amount of Levemir® you inject probably won't vary that much from day to day and you will normally inject it at about the same time.
- However the amount of NovoRapid® that you need at each injection can vary. This is because of changes in the amount of food you eat or the amount of exercise you take.
- You will need to check your blood glucose level regularly and if necessary adjust your insulin dose up or down if needed. Your doctor or diabetes nurse will give you advice and will help you learn how to do this when necessary.

### What about meal sizes?

If you change the size of your meals significantly, you can change the amount of insulin you inject. You will need to experiment at first with the help of your doctor or diabetes nurse and the results of your blood glucose tests.

### Smaller meals

- If you want to eat a smaller meal than usual, consider taking less NovoRapid® before you eat.

### Larger meals

- If you want to eat a larger meal than usual, consider taking more NovoRapid® before you eat.

Discuss with your doctor or diabetes nurse what is best for you.



## ● Changing meal times

- You can change your meal times if needed, without upsetting your blood glucose control.

The basic rule is to inject your NovoRapid® when you are about to have your meal or have your meal in front of you. Because NovoRapid® works very fast, you have the flexibility to inject immediately before, or even soon after your meal, if you need to.

Discuss with your doctor or diabetes nurse what is best for you.

### Missed a meal?

- In general, try not to miss a meal.
- If you do miss a meal, do not take your NovoRapid® injection.
- Try to have a meal as soon as possible and take your NovoRapid® injection immediately before your meal.
- The only exception to this rule applies if you are ill.

### What if I am ill?

When you are ill, no matter how little food you are eating, it is important that you still take insulin.

Ask your doctor or diabetes nurse what action to take when you are ill.

### What else should I do?

- Test your blood glucose more frequently, as you may need to adjust your insulin dose.
- Drink plenty of fluids.
- Eat your regular food if you are able.
- Rest.



## ● Storing my Levemir® and NovoRapid®

After injection, keep your Levemir® and NovoRapid® with you. Protect it from excessive sunlight and heat. Put the cap back on your pen when you are not using it to protect from light. The Levemir® and NovoRapid® that you are using or a spare you are carrying should not be kept in the refrigerator. Carry it with you and keep at room temperature (not above 30°C / 86°F).

### How long can I use Levemir® and NovoRapid® outside the fridge?

You can keep Levemir® at room temperature (not above 30°C / 86°F) for up to 6 weeks. You can keep NovoRapid® at room temperature (not above 30°C / 86°F) for up to 4 weeks. Apart from a spare cartridge or FlexPen® you may be carrying, any Levemir® or NovoRapid® that you are not using should be kept in the refrigerator.

### Where in the refrigerator should I keep my Levemir® and NovoRapid®?

Keep your Levemir® and NovoRapid® away from the freezer compartment. Any Levemir® or NovoRapid® that has been frozen must not be used.

### How long can I keep my Levemir® and NovoRapid®?

Check the expiry dates on the labels or cartons, Levemir® or NovoRapid® should not be used after the expiry date stated.

**If you have any problems with your treatment or have any worries, please contact one of the following:**

**Hospital clinic:**

**GP:**

**Chemist:**