

HOW TO USE LEVEMIR® BASAL INSULIN

T 1



INSTRUCTIONS
FOR PATIENTS
WITH
TYPE 1
DIABETES



Levemir®
(detemirinsuliini)

Dear Levemir® insulin user,

Your doctor has prescribed you Levemir® insulin for the treatment of type 1 diabetes. Before starting the treatment, please read the patient information leaflet carefully.

This leaflet has information on Levemir® insulin and how to start using it. We also explain how to inject insulin and list matters that you need to consider in your insulin treatment. The leaflet also contains information on hypoglycaemia, or low blood sugar.

The goals of diabetes treatment are always set individually together with the patient. At the end of this leaflet, there is a page where you can write down your goals together with your doctor.

Novo Nordisk wishes to support your successful diabetes treatment. We provide you with the following services to help you live with your diabetes.

novoInfo

- Any questions about our products and material orders
- Available from Monday to Friday, 9 am to 2 pm, at tel. **0800 122 566** or **novoinfo@novonordisk.fi**

The mobile guide to carbohydrates

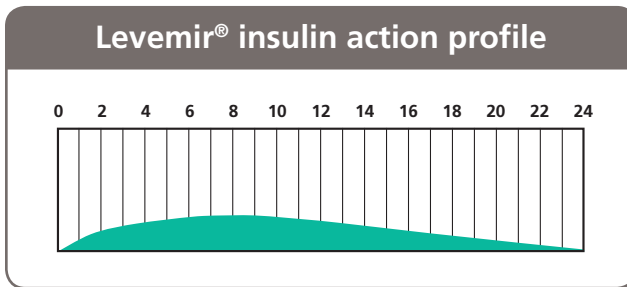
- Supports the diet of patient with insulin treated diabetes.
- A free electronic guide to carbohydrates:
 - For Nokia, Android and iPhone (available at the app stores: search with 'novo' and 'carb')
 - For computers and tablets (www.novonordisk.fi)

Best regards,
Novo Nordisk Farma Oy



What is Levemir® (insulin detemir) and how is it used?

- The active ingredient is insulin detemir, a long-acting insulin analogue
- A basal insulin with a long and steady lowering effect on blood sugar



A diagrammatic description of the insulin action profile.

The effects of basal insulin always vary according to the individual and depend on the dose.

How and how often should I inject Levemir® insulin?

When used as part of a basal insulin + meal-time insulin treatment for type 1 diabetes, Levemir® is administered **once or twice a day according to your needs**. Levemir® dosage is determined individually.

If you take **one** Levemir® injection daily

Increase your Levemir® dose until you have reached your fasting blood sugar goal.

If you take **two** Levemir® injections daily

Increase your Levemir® dose in the evening until you have reached your fasting blood sugar goal.

Adjust your Levemir® dose in the morning until you have reached the desired pre-dinner blood sugar level.

ALWAYS FOLLOW THE INDIVIDUAL INSTRUCTIONS GIVEN TO YOU BY YOUR HEALTH CARE PROVIDER.

How do I identify a Levemir® product?

A Levemir® product can be identified by the name printed on the label and the green identification colour. Levemir® is a clear and colourless solution that does not need to be shaken before use.

What kinds of Levemir® packages are available?

Levemir® is available in a pre-filled FlexPen® and a Penfill® cartridge. The Penfill® cartridges can be used in NovoPen® insulin pens (NovoPen® 4 and NovoPen Echo®).



FlexPen® is a pre-filled insulin pen. Once FlexPen® is empty, take a new FlexPen®.



NovoPen® 4 is for multiple use and compatible with Penfill® cartridges. Dosing is in increments of 1 units.



NovoPen Echo® is an insulin pen with a memory function and it is also compatible with Penfill® cartridges. The pen records the dose and time of the last injection. Dosing is in increments of 0.5 units.

Before injecting

Check the label of the FlexPen® or Penfill® cartridge to make sure that you are taking the right type of insulin

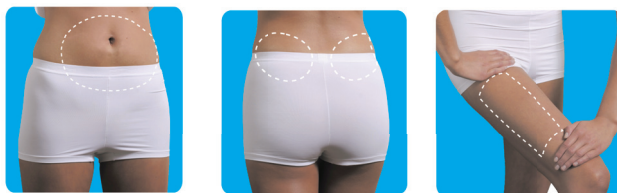
- Make sure that the FlexPen® and Penfill® cartridge are not damaged
- Do not use the pen or cartridge if you notice any damage
- The Levemir® solution should be clear and colourless
- The Levemir® solution does not need to be shaken before use

Do I always need to remove the air bubbles in the cartridge before injecting Levemir®?

- **Yes.** Before each injection, make an airshot with a dose of two units to remove any air bubbles from the pen and the cartridge. This will also ensure that the needle is not blocked

Where do I inject Levemir® insulin?

- Levemir® insulin can be injected under the skin in the thigh (front part), abdomen, buttock (upper part), upper arm or shoulder area
- Vary the injection sites and discuss them with your health care provider
- Follow the instructions on insulin doses and injection techniques that you received from your health care provider
- Never inject insulin in a muscle or vein



When can I pull the needle out from the skin?

Keep the needle in the skin for at least 6 to 10 seconds after injecting. Keep the push button pressed while withdrawing the needle from the skin. This will make sure that the full dose has been given.

After injection

- Remove the needle and throw it away. If you don't remove the needle, variations in temperature can result in the solution dripping through the used needle, which can block the needle and make injecting impossible
- Always store your insulin pen without the needle. Air can get into the pen through the needle

Tips on how to prevent reactions from the injection and to ensure the proper function of the pen:

- **Always use a new needle for each injection**
- Vary the injection sites

The injection site is red, itchy and swollen – is this normal?

Reactions at the injection site are not rare. They usually disappear in a few weeks after the start of insulin treatment. If the symptoms persist, contact your health care provider.

Storage of Levemir® insulin

- **Keep unopened** Levemir® insulin in the refrigerator (+2°C to +8°C). Do not allow it to freeze. To prevent freezing, do not keep insulin near the back wall or the freezer box of the refrigerator
- **Once opened**, store Levemir® insulin at room temperature below 30°C. It will keep for 6 weeks at room temperature
- Protect Levemir® from sunlight and excessive heat
- Check the expiry date on the package and the label. Do not use the product after the expiry date

Injecting Levemir® insulin with FlexPen®



1. Attaching the needle

Take a new NovoFine® needle and screw it tightly onto your FlexPen®. Pull off the outer and inner needle caps. Keep the big outer needle cap for later use.



2. Preparing the FlexPen® for use

- Set the dose selector to 2 units
- Hold the FlexPen® with the needle pointing up and tap the cartridge gently with your finger a few times
- Press the push button all the way in a drop of insulin should now appear at the needle tip
- Carry out this procedure before each injection



3. Selecting your dose

You can select the dose in increments of one unit (1 to 60 units). It is easy to increase or decrease the selected dose as needed.



4. Reliable injection

After administering the injection, keep the needle in the skin for 6 to 10 seconds. Keep the push button pressed all the way in until you have pulled the needle out from the skin. This will make sure that the full dose has been administered.



The dose selector will return to zero during the injection. This will tell you that the injection has been successful.



5. Removing the needle

Remove the needle after each injection. Place the big outer needle cap back on the needle and unscrew the needle. Dispose of the needle carefully. When the insulin cartridge is empty, you can dispose of the used FlexPen® with the energy waste or mixed waste.

The instructions on these two pages refer to the use of the FlexPen® insulin pen. If you are using a NovoPen® 4 or NovoPen Echo®, please read the instructions that refer to these insulin pens.

Important aspects of insulin treatment

Sickness

When you are sick, you will need more insulin. Take the normal dose of basal insulin even if you cannot follow your usual diet because of your sickness. Check your blood sugar more often than normal, and adjust your insulin as needed. Fever, diarrhoea and vomiting in particular can quickly result in dehydration, so remember to drink lots of liquids.

Diet

The same balanced and healthy diet is recommended for diabetics and non-diabetics alike: the diet should be low in saturated and moderately low in unsaturated fats, high in fibre, low in salt and moderately low in sugar.

Exercise

Regular exercise is beneficial to everybody but particularly so to diabetics. The effects of exercise vary from one diabetic to another. Checking your blood sugar before and after exercise will help you understand how your body reacts to exercise. Light exercise will not usually require any changes in insulin dosage. The lowering effect of exercise on blood sugar usually appears after exercise, often many hours afterwards. But if you exercise for over an hour, the lowering effect may already appear during exercise. Therefore it is recommended for insulin-treated diabetics to take some juice, fruit or bread along for longer-lasting exercise sessions. The insulin dose can even be lowered that day if you exercise for a long period of time. You can lower the dose before and after exercise. However, very strenuous exercise can also increase blood sugar as stress hormones (insulin antagonists) are produced. You can prevent this by eating less (quickly absorbed) carbohydrates and by also increasing your insulin dose a little.

Alcohol

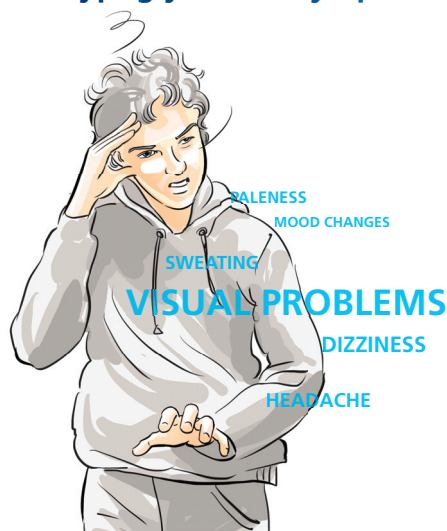
Diabetics may drink alcohol in moderation (one unit a day for women, and two units for men), but drinking alcohol increases the risk of hypoglycaemia. It can also be more difficult to identify hypoglycaemia if a person is intoxicated – and hypoglycaemia can also be mistaken for intoxication.

Hypoglycaemia

Hypoglycaemia means an abnormally low level of sugar in the blood. It is caused by too much insulin or other medications for diabetes. Blood sugar is too low when it is under 4.0 mmol/l (millimoles per litre). This is called mild hypoglycaemia.

Severe hypoglycaemia occurs if the blood sugar level falls below 3.1 mmol/l. Left untreated, severe hypoglycaemia may lead to loss of function and unconsciousness, and the patient will need help. However, hypoglycaemia is not something to be afraid of. The body will always try to prevent the blood sugar from falling too much, and the blood sugar level may increase by itself (counteraction).

Hypoglycaemia symptoms



What should I do if I experience hypoglycaemia symptoms?

Take some quickly absorbed carbohydrates immediately. An amount corresponding 20 grams of sugar is suitable first aid. It can take 10 to 15 minutes before the carbohydrates are absorbed in the body and start to take effect, so be patient.

Recommended carbohydrates include:

- 8 glucose tablets (Siripiri®, Dexal®)
- 200 ml of fruit juice
- 2 tablespoons of honey or syrup
- 8 lumps of sugar
- a medium-sized banana
- 2 apples, 100g each

If hypoglycaemia results in unconsciousness, the quickest way to help the patient is to administer an injection of glucagon. If no glucagon is available, call an ambulance immediately and tell them that the patient is suffering from an insulin shock. Never try to give an unconscious person something to eat or drink as they may suffocate. However, when you are waiting for the ambulance you can carefully spread some honey or syrup on the mucous membrane inside the patient's mouth. The sugar will be absorbed into the blood through the membrane.

Your blood sugar target level

Name: _____

Doctor: _____

Diabetes nurse: _____

Blood sugar in the morning mmol/l

Blood sugar before a meal mmol/l

Blood sugar 2 hours after a meal mmol/l

Blood sugar before going to bed mmol/l

Levemir® starting dose: _____

Dose adjustment: _____

Meal-time insulin: _____

Dose adjustment: _____

The general goals of diabetes treatment

Treatment goals are always defined individually.

Measurement

HbA_{1c} (mmol/mol, %)

Fasting blood sugar (mmol/l)

Post-meal blood sugar

(about 2 hours after a meal) (mmol/l)

Goal

under 53 (7,0%)

under 7

under 8-10

Individual targets may be higher or lower than general targets for specific reasons.

novoinfo
Expert advice free of charge

0800 122 566
novoinfo@novonordisk.fi

Novo Nordisk is a global healthcare company with 90 years of innovation and leadership in diabetes care. The company also has leading positions within haemophilia care, growth hormone therapy and hormone replacement therapy. Headquartered in Denmark, Novo Nordisk employs approximately 40,000 employees in 75 countries, and markets its products in more than 180 countries. In Finland, Novo Nordisk Farma Oy employs a staff of 65.

Changing Diabetes® explains the ambition and commitment with which we develop our business and how we wish to be known as a company. It means that the goal behind our every decision and action is to improve the lives of people living with diabetes. We try to reach this goal by developing pharmaceutical treatments that are based on a deep understanding of the individual needs, hopes and views of diabetics. In our work, we respect the environment and carry our financial and social responsibility.



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