

PRESCRIPTION MEDICINE

Read all of the information in this leaflet carefully because it contains important information for you. The product has been prescribed for you personally and you should not pass it on to others.

If you have further questions, please ask your doctor or your pharmacist.

100 IU/ml

Mixtard[®] 30

Mixtard[®] 50

Protaphane[®]

Human insulin suspension for injection

What is the product for?

Active substance and excipients

The active substance is human insulin produced biosynthetically (i.e. by use of recombinant DNA technology).

Mixtard[®] 30, Mixtard 50 and Protaphane[®] also contains Protamine sulfate, Zinc chloride, Glycerol, dibasic sodium phosphate dihydrate, Meta-cresol, Phenol, Sodium hydroxide, Hydrochloric acid and Water for injections.

Pharmaceutical form and contents

The product is a white and uniformly cloudy suspension for injection contained in a 10 ml vial.

Pharmacotherapeutic group

This insulin is an antidiabetic agent, which lowers your blood sugar after injection.

Mixtard 30 is a premixed neutral suspension consisting of 30% soluble (neutral) insulin and 70% Isophane insulin. It has when injected under your skin (subcutaneously) a rapid onset of effect (within ½ an hour), a maximum effect between 2 and 8 hours and the effect lasts for up to 24 hours.

Mixtard 50 is a premixed neutral suspension consisting of 50% soluble (neutral) insulin and 50% Isophane insulin. It has when injected under your skin (subcutaneously) a rapid onset of effect (within ½ an hour), a maximum effect between 2 and 8 hours and the effect lasts for up to 24 hours.

Protaphane is a neutral suspension consisting of 100% Isophane insulin. It has when injected under your skin (subcutaneously) an onset of effect within 1½ hour, a maximum effect between 4 and 12 hours and the effect lasts for up to 24 hours. Due to the long action Protaphane may be given in combination with short acting insulin preparations.

Why have you been given this insulin?

Therapeutic indication

This insulin is used for the treatment of diabetes mellitus (a disease where your pancreas does not produce enough insulin to control your blood sugar level). Extra insulin is therefore needed.

Before you take this insulin

You should not take insulin if:

- Your blood sugar is too low (hypoglycaemia).
- You are allergic to human insulin or any of the excipients contained in this insulin.

What precautions have to be taken before use?

Do not use this insulin if it does not appear white and uniformly cloudy when mixed by rolling the vial between your hands. The insulin vials have a protective colour coded, tamperproof plastic cap. To get insulin from a new vial, you must remove the plastic cap. If it is loose or missing when you buy the vial, then return the vial to your local pharmacy.

Do not use this insulin in insulin pumps.

Can insulin be taken with other medicines?

Your insulin need may change if you take other medicines. You should therefore consult your doctor if you are currently taking any of the listed medicines or medicines which you are not sure of:

Oral hypoglycaemic agents (used for the treatment of Type 2 diabetes), monoamine oxidase (MAO-) inhibitors (used for the treatment of depression), non-selective beta-blocking agents (used for the treatment of certain heart conditions and high blood pressure), angiotensin converting enzyme (ACE-) inhibitors (used for the treatment of certain heart conditions, high blood pressure or elevated protein/albumin in the urine), salicylates (e.g. aspirin, used to relieve pain and lower fever), anabolic steroids and glucocorticoids, oral contraceptives (used for birth control), thiazides (used for the treatment of high blood pressure or edema), thyroid hormones (used for the treatment of malfunction of the thyroid gland), sympathomimetics (e.g. used for the treatment of asthma), danazol or octreotide.

What beverages should be taken with caution?

Alcohol (including beer and wine) may lead to hypoglycaemia (too low blood sugar). Therefore be careful when you drink alcohol and never drink alcohol on an empty stomach.

What do you have to consider during pregnancy or while breastfeeding?

If you are pregnant or planning pregnancy you should see your doctor immediately to discuss your need for insulin in order to control your diabetes and thereby avoid hyperglycaemia (too high blood sugar) and hypoglycaemia (too low blood sugar) as these conditions could harm your baby.

Breastfeeding while you are taking insulin does not put your baby at risk. Your insulin dosage and diet may however need to be adjusted.

What has to be observed in road traffic and when operating machines?

Your ability to concentrate or react may be reduced if you have hypoglycaemia. Please keep this possible problem in mind in all situations where you might put yourself and others at risk (e.g. driving a car or operating machinery). You should contact your doctor about the advisability of driving if you have:

- Frequent episodes of hypoglycaemia.
- Reduced or absent warning signs of hypoglycaemia.

What precautions have to be taken during illness?

Never stop taking insulin if you are ill, as you may need to have more insulin than normal. This may be especially the case if you have an infection, have fever, eat less than usual or vomit.

If you get certain problems with your kidneys or your liver your doctor may lower your insulin dosage.

What precautions have to be taken before going abroad?

The time difference between countries may mean that you have to take your insulin and meals at different times than usual. You should therefore consult your doctor if you are planning to go abroad.

Using this insulin

Follow carefully the advice from your doctor and/or your diabetes team regarding type of insulin, dosage and time of administration, blood sugar monitoring, diet and physical activity in order to achieve good diabetes control.

How to switch type of insulin

If you switch from the type of insulin you use (for example from animal insulin or another brand of human insulin) to this human insulin, your dosage may have to be adjusted by your doctor. If an adjustment is needed, it may occur with the first dose or during the first several weeks or months.

A few patients have reported that after switching from animal insulin to human insulin, the early warning symptoms of hypoglycaemia (low blood sugar) were less obvious than they were with their previous insulin. The character and intensity of these warning symptoms may also change during periods of tight blood sugar control, for instance during intensified insulin therapy.

How to take this insulin

Before injection make sure that you have got the type and strength of insulin prescribed and follow carefully the instructions on how to use your Novo Nordisk insulin delivery system.

This insulin is for injection under the skin. The product should never be injected in a vein.

You will feel the effect more quickly if the insulin is injected into your abdomen.

However injections may also be given in your thigh, buttock or if convenient in your upper arm.

It is recommended to eat a meal or snack containing carbohydrate within 30 minutes of the injection and to measure your blood sugar level regularly.

If you use only one type of insulin

1. Just before you use it, roll the vial between your hands until the liquid is white and uniformly cloudy.
2. Draw into the syringe the same amount of air as the dose of insulin you are going to inject. Inject the air into the vial.
3. Turn the vial and syringe upside down and draw the correct insulin dose into the syringe. Pull the needle out of the vial. Then expel the air from the syringe and check that the dose is correct.
4. Inject immediately.

If you have to mix two types of insulin

1. Just before use, roll the cloudy (longer acting) insulin between your hands until the liquid is white and uniformly cloudy.
2. Draw into the syringe the same amount of air as the dose of cloudy insulin. Inject the air into the vial containing cloudy insulin and pull out the needle.
3. Draw into the syringe the same amount of air as the dose of clear (short acting) insulin. Inject the air into the vial containing clear insulin. Turn the vial and syringe upside down and draw up the prescribed dose of clear insulin. Expel any air from the syringe and check that the dose is correct.
4. Push the needle into the vial of cloudy insulin, turn the vial and syringe upside down and draw out the dose you have been prescribed. Expel any air from the syringe and check the dose. Inject the mixture immediately.
5. Always mix clear and cloudy insulin in the same sequence.

How to inject this insulin

- Pinch your skin between two fingers, push the needle into the skinfold and inject the insulin under the skin.
- Keep the needle under the skin for at least 6 seconds to make sure you have injected all the insulin.
- If blood appears after the needle has been withdrawn, press the injection site lightly with a finger.

Emergencies and overdoses

What factors may result in hypoglycaemia (too low blood sugar)?

If you take too much insulin, miss a meal or exercise more than usual your blood sugar may become too low (i.e. hypoglycaemia).

The first symptoms of hypoglycaemia can come on suddenly. They may include:

Cold sweat, cool pale skin, drowsiness, nervousness or tremor, anxious feeling, unusual tiredness and weakness, confusion, difficulty in concentration, excessive hunger, temporary vision changes, headache, nausea or rapid heart beat.

What to do in case of hypoglycaemia?

If you experience any of the symptoms mentioned above you should immediately take sugar or a sugar containing product. So always carry a few sugar lumps, sweets, biscuits or fruit juice with you. Tell your relatives, friends and close workmates that you have diabetes and how they can help you if you

get a severe hypoglycaemic reaction. They must know that they should not give you anything to eat or drink if you are unconscious as you could choke. If you are unconscious, you should be turned on your side and your relatives, friends or workmates should get medical help immediately. You may recover from unconsciousness more quickly if you are given an injection of the hormone glucagon (e.g. GlucaGen[®] HypoKit) by a person who has been instructed in how to use it. If glucagon is injected you should also be given sugar, a product containing sugar or glucose by mouth as soon as you are conscious again. If you do not respond to glucagon treatment, you will have to be treated in a hospital.

See your doctor if you have had repeated hypoglycaemic reactions or one reaction which led to unconsciousness, as your insulin dose may need to be changed. If severe hypoglycaemia is not treated, it can cause temporary or permanent brain damage, and death.

What factors may result in hyperglycaemia (too high blood sugar)?

If you are ill with fever or if you eat much more than usual and repeatedly take less insulin than you need, your blood sugar may become unusually high (i.e. result in hyperglycaemia).

The symptoms of unusually high blood sugar levels will appear gradually. They include:

Increased urination, thirst, loss of appetite, nausea, vomiting, drowsiness (fatigue), flushed dry skin, dry mouth and acetone breath.

What to do in case of hyperglycaemia?

If you recognize any of the symptoms mentioned above, you should test your blood sugar level and your urine for ketones as soon as possible as the symptoms may indicate that you have a condition called ketoacidosis. This condition is critical and may untreated result in diabetic coma and death. You should therefore seek medical advice immediately.

What side effects may this insulin cause?

This insulin may cause hypoglycaemia of which the symptoms have been mentioned previously.

Redness, swelling and itching at the site of injection (also called local allergic reactions) may be experienced by some people. Usually these symptoms disappear within a few weeks during continued use. If the symptoms do not disappear, spread to other parts of your body or if you suddenly feel sick (i.e. sweating, vomiting, difficulty breathing, rapid heart beat, feeling dizzy) you should consult your doctor immediately as these reactions may be due to systemic allergic reactions which are rare but may be serious.

When you first start your insulin treatment you may suffer from visual disturbances or swelling of the extremities.

Too frequent injections at the same injection site may result in skin thickening or pitting at the injection site (also called lipodystrophy). In order to avoid this you should choose a new site for each injection within the same area. You should also tell your doctor or pharmacist if you notice any other side effects which are likely to have been caused by this insulin.

How to store this insulin

This insulin which is not being used should be stored at 2°C - 8°C in a refrigerator (not too near the freezing compartment). This insulin that you are using can be kept at room temperature (up to 25°C) for up to 6 weeks.

This insulin should never be exposed to heat or direct sunlight and should never be frozen.

Keep this insulin out of the reach and sight of children.

Never use insulin after the expiry date printed on the pack.

Never use this insulin if the liquid is not white and uniformly cloudy after rolling.

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