

Actrapid®

100 IU/ml

Solution for injection in vial

Insulin human (rDNA)

Read all of this leaflet carefully before you start using your insulin.

- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor, nurse or your pharmacist.
- This medicine has been prescribed for you. Do not pass it on to others. It may harm them, even if their symptoms are the same as yours.
- If any of the side effects get serious, or if you notice any side effects not listed in this leaflet, please tell your doctor, nurse or your pharmacist.

1. What Actrapid® is and what it is used for

Actrapid® is human insulin used to treat diabetes. Diabetes mellitus is a disease where your body does not produce enough insulin to control the level of your blood sugar. Actrapid® is a fast-acting insulin. This means that it will start to lower your blood sugar about ½ hour after you take it, and the effect will last for approximately 8 hours. Actrapid® is often given in combination with longer-acting insulin products.

2. Before you use Actrapid®

Do not use Actrapid®

- ▶ **In insulin infusion pumps.**
- ▶ **If you are allergic (hypersensitive)** to human insulin or any of the other ingredients in Actrapid® (see 7 *Further information*).
- ▶ **If you suspect hypoglycaemia** (low blood sugar) is starting (see 4 *What to do in an emergency*).
- ▶ **If the protective cap is loose or missing.** Each vial has a protective, tamper-proof plastic cap. If it is not in perfect condition when you get the vial, return the vial to your pharmacy.
- ▶ **If it has not been stored correctly** or been frozen (see 6 *How to store Actrapid®*).
- ▶ **If the insulin does not appear clear and colourless.**

Before using Actrapid®

- ▶ **Check the label to make sure** it is the right type of insulin.
- ▶ **Remove the protective cap.**

Take special care with Actrapid®

- ▶ **If you have trouble** with your kidneys or liver, or with your adrenal, pituitary or thyroid glands.
- ▶ **If you drink alcohol** watch for signs of a hypo and never drink alcohol on an empty stomach.
- ▶ **If you exercise** more than usual or if you want to change your usual diet, as this may affect your blood sugar level.
- ▶ **If you are ill** carry on taking your insulin and consult your doctor.
- ▶ **If you are going abroad** travelling over time zones may affect your insulin needs and the timing of your injections. Consult your doctor if you are planning such travelling.

Skin changes at the injection site

The injection site should be rotated to help prevent changes to the fatty tissue under the skin, such as skin thickening, skin shrinking or lumps under the skin. The insulin may not work very well if you inject into a lumpy, shrunken or thickened area (see 3 *How to use Actrapid®*). Tell your doctor if you notice any skin changes at the injection site. Tell your doctor if you are currently injecting into these affected areas before you start injecting in a different area. Your doctor may tell you to check your blood sugar more closely, and to adjust your insulin or your other antidiabetic medications dose.

Using other medicines

Some medicines affect the way glucose works in your body and this may influence your insulin dose. Listed below are the most common medicines which may affect your insulin treatment. Tell your doctor, nurse or

pharmacist if you are taking or have recently taken any other medicines, including medicines obtained without a prescription. In particular, you should tell your doctor if you are using any medicine mentioned below that may affect your blood sugar level.

Your need for insulin may change if you also take: other medicines for treatment of diabetes; monoamine oxidase inhibitors (MAOI); beta-blockers; ACE-inhibitors; acetylsalicylic acid; anabolic steroids; sulphonamides; oral contraceptives; thiazides; glucocorticoids; thyroid hormone therapy; sympathomimetics; growth hormone; danazol; octreotide or lanreotide.

Thiazolidinediones (class of oral antidiabetic medicines used for the treatment of type 2 diabetes mellitus). Some patients with long-standing type 2 diabetes mellitus and heart disease or previous stroke who are treated with thiazolidinediones in combination with insulin may develop heart failure. Inform your doctor as soon as possible if you experience signs of heart failure such as unusual shortness of breath or rapid increase in weight or localised swelling (oedema). Do not use Actrapid® or other insulin products if you are taking thiazolidinediones and contact your doctor for advice

Pregnancy and breast-feeding

- ▶ If you are pregnant, think you may be pregnant or are planning to have a baby, ask your doctor for advice before taking this medicine. Actrapid® can be used during pregnancy. Your insulin dose may need to be changed during pregnancy and after delivery. Careful control of your diabetes, particularly prevention of hypoglycaemia, is important for the health of your baby.
- ▶ There are no restrictions on treatment with Actrapid® during breast-feeding. Please contact your doctor for advice.

Driving and using machines

If you drive or use tools or machines, watch out for signs of a hypo. Your ability to concentrate or to react will be less during a hypo. Never drive or use machinery if you feel a hypo coming on. Discuss with your doctor whether you can drive or use machines at all, if you have a lot of hypos or if you find it hard to recognise hypos.

3. How to use Actrapid®

Talk about your insulin needs with your doctor and nurse. Follow their advice carefully.

If your doctor has switched you from one type or brand of insulin to another, your dose may have to be adjusted by your doctor.

Eat a meal or snack containing carbohydrates within 30 minutes of the injection.

It is recommended that you measure your blood sugar regularly.

How to use this insulin

Actrapid® is administered by injection under the skin (subcutaneously). Always vary the sites you inject within the same region, to reduce the risk of developing lumps or skin pitting (see *5 Possible side effects*). The best places to give yourself an injection are: the front of your waist (abdomen); your buttocks; the front of your thighs or upper arms. Your insulin will work more quickly if you inject it around the waist.

Actrapid® may also be administered intravenously in special situations by your healthcare professional.

To inject Actrapid® on its own

1. Draw air into syringe, in the same amount as the dose of insulin you need.
2. Inject the air into vial; push the needle through the rubber stopper and press the plunger.
3. Turn the vial and syringe upside down.
4. Draw the right dose of insulin into the syringe.
5. Pull the needle out of the vial.
6. Make sure there is no air left in the syringe: point the needle upwards and push the air out.
7. Check you have the right dose.
8. Inject straight away.

To mix Actrapid® with long-acting insulin

1. Roll the vial of long-acting insulin between your hands. Do this until the liquid is uniformly white and cloudy.
2. Draw as much air into the syringe as the dose of long –acting insulin you need. Inject the air into the long-acting insulin vial, then pull out the needle.
3. Draw as much air into the syringe as the dose of Actrapid® you need. Inject the air into the Actrapid® vial. Then turn the vial and syringe upside down.
4. Draw the right dose of Actrapid® into the syringe. Pull the needle out of the vial. Make sure there is no air left in the syringe: point the needle upwards and push the air out. Check the dose.
5. Now push the needle into the vial of long-acting insulin.
6. Then turn the vial and syringe upside down.
7. Draw the right dose of long-acting insulin into the syringe.
8. Pull the needle out of the vial.
9. Make sure there is no air left in the syringe and check the dose.
10. Inject the mixture straight away.

Always mix fast-acting and long-acting insulin in this order. Inject the insulin

- Inject the insulin under the skin. Use the injection technique advised by your doctor or nurse
- Keep the needle under your skin for at least 6 seconds to make sure that the full dose has been delivered.

4. What to do in an emergency

If you get a hypo

A hypo means your blood sugar level is too low.

The warning signs of a hypo may come on suddenly and can include: cold sweat; cool pale skin; headache; rapid heart beat; feeling sick; feeling very hungry; temporary changes in vision; drowsiness; unusual tiredness and weakness; nervousness or tremor; feeling anxious; feeling confused; difficulty in concentrating.

If you get any of these signs, eat glucose tablets or a high sugar snack (sweets, biscuits, fruit juice), then rest.

Do not take any insulin if you feel a hypo coming on.

Carry glucose tablets, sweets, biscuits or fruit juice with you, just in case.

Tell your relatives, friends and close colleagues that if you pass out (become unconscious), they must turn you on your side and seek medical advice straight away. They must not give you any food or drink as it could choke you.

- **If severe hypoglycaemia** is not treated, it can cause brain damage (temporary or permanent) and even death.
- **If you have a hypo** that makes you pass out, or a lot of hypos, talk to your doctor. The amount or timing of insulin, food or exercise may need to be adjusted.

Using glucagon

You may recover more quickly from unconsciousness with an injection of the hormone glucagon by someone who knows how to use it. If you are given glucagon, you will need glucose or a sugary snack as soon as you are conscious. If you do not respond to glucagon treatment, you will have to be treated in a hospital. Seek medical advice after an injection of glucagon; you need to find the reason for your hypo to avoid getting more.

Causes of a hypo

You get a hypo if your blood sugar gets too low. This might happen:

- If you take too much insulin.
- If you eat too little or miss a meal.
- If you exercise more than usual.

If your blood sugar gets too high

Your blood sugar may get too high (this is called hyperglycaemia).

The warning signs appear gradually. They include: increased urination; feeling thirsty; losing your appetite; feeling sick (nausea or vomiting); feeling drowsy or tired; flushed, dry skin; dry mouth and a fruity (acetone) smell of the breath.

If you get any of these signs, test your blood sugar level and test your urine for ketones if you can. Then seek medical advice straight away.

These may be signs of a very serious condition called diabetic ketoacidosis. If you do not treat it, this could lead to diabetic coma and eventually death.

Causes of hyperglycaemia

- Having forgotten to take your insulin
- Repeatedly taking less insulin than you need
- An infection or a fever
- Eating more than usual
- Less exercise than usual.

5. Possible side effects

Like all medicines, Actrapid® can cause side effects, although not everybody gets them.

Side effects reported very commonly

(in more than 1 patient in 10)

Low blood sugar (hypoglycaemia). See the advice in 4 *What to do in an emergency*.

Side effects reported uncommonly

(in less than 1 patient in 100)

Vision problems. When you first start your insulin treatment, it may disturb your vision, but the disturbance is usually temporary.

Skin changes at the injection site. If you inject insulin at the same place, the fatty tissue may shrink (lipoatrophy) or thicken (lipohypertrophy) (in less than 1 patient in 100). Lumps under the skin may also be caused by build-up of a protein called amyloid (cutaneous amyloidosis; how often this occurs is not known). Skin reactions can become more severe and the insulin may not work very well if you inject into a lumpy, shrunken or thickened area. Change the injection site with each injection to help prevent these skin changes.

Signs of allergy. Reactions (redness, swelling, itching) at the injection site may occur (local allergic reactions). These usually disappear after a few weeks of taking your insulin. If they do not disappear, see your doctor.

Seek medical advice immediately:

- If signs of allergy spread to other parts of the body, or
- If you suddenly feel unwell, and you: start sweating; start being sick (vomiting); have difficulty in breathing; have a rapid heart beat; feel dizzy.

Painful neuropathy (pain due to nerve damage). If your blood sugar level improves very fast, you may get nerve related pain, which may occur as a burning, tingling or electric pain. This is called acute painful neuropathy and is usually transient. If it does not disappear, consult your doctor.

Swollen joints. When you start taking insulin, water retention may cause swelling around your ankles and other joints. Normally this soon disappears.

Side effects reported very rarely

(in less than 1 patient in 10,000)

Diabetic retinopathy (eye disease related to diabetes which can lead to loss of vision). If you have diabetic retinopathy and your blood sugar levels improve very fast, the retinopathy may get worse. Ask your doctor about this.

Serious allergic reaction to Actrapid® or one of its ingredients (called a systemic allergic reaction). See also the warning in 4 *What to do in an emergency*.

If any of the side effects get serious, or if you notice any side effects not listed in this leaflet, please tell your doctor, nurse or pharmacist.

6. How to store Actrapid®

Keep out of the reach and sight of children.

Do not use Actrapid® after the expiry date which is stated on the label and the carton after 'Expiry'. The expiry date refers to the last day of that month.

Actrapid® vial that is not being used is to be stored in the refrigerator at 2°C - 8°C, away from the cooling element. Do not freeze.

Actrapid® vial that is being used or carried as a spare is not to be kept in a refrigerator. You can carry it with you and keep it at room temperature (below 30°C) for up to 6 weeks.

Always keep the vial in the outer carton when you are not using it in order to protect it from light.

Actrapid® must be protected from excessive heat and light.

Medicines should not be disposed of via wastewater or household waste. Ask your pharmacist how to dispose of medicines no longer required. These measures will help to protect the environment.

7. Further information

What Actrapid® contains

- **The active substance** is insulin human made by recombinant biotechnology. 1 ml contains 100 IU of insulin human. 1 vial contains 10 ml equivalent to 1,000 IU.
- **The other ingredients** are zinc chloride, glycerol, metacresol, sodium hydroxide, hydrochloric acid and water for injections.

What Actrapid® looks like and contents of the pack

The solution for injection comes as a clear, colourless, aqueous solution.

It is supplied in packs of 1 or 5 vials of 10 ml (not all packs may be marketed).

Product Owner

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