PACKAGE LEAFLET: INFORMATION FOR THE USER

Truoxin I.V. 200mg/100ml solution for infusion
Truoxin I.V. 400mg/200ml solution for infusion

Ciprofloxacin

Read all of this leaflet carefully before you start using this medicine.
- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor or pharmacist.
- This medicine has been prescribed for you. Do not pass it on to others. It may harm them, even if their signs of illness are the same as yours.
- - If you get any side effects, talk to your doctor or pharmacist. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet

1. What Truoxin IV is and what it is used for

Truoxin I.V. contains the active substance ciprofloxacin. Truoxin I.V. is an antibiotic belonging to the fluoroquinolone family. Ciprofloxacin works by killing bacteria that cause infections. It only works with specific strains of bacteria.

Adults
Truoxin I.V. is used in adults to treat the following bacterial infections:
- respiratory tract infections
- long lasting or recurring ear or sinus infections
- urinary tract infections
- genital tract infections in men and women
- gastro-intestinal tract infections and intra-abdominal infections
- skin and soft tissue infections
- bone and joint infections
- anthrax inhalation exposure

Ciprofloxacin may be used in the management of patients with low white blood cell counts (neutropenia) who have a fever that is suspected to be due to a bacterial infection.

If you have a severe infection or one that is caused by more than one type of bacterium, you may be given additional antibiotic treatment in addition to Truoxin I.V.

Children and adolescents
Truoxin I.V. is used in children and adolescents, under specialist medical supervision, to treat the following bacterial infections:

- lung and bronchial infections in children and adolescents suffering from cystic fibrosis
- complicated urinary tract infections, including infections that have reached the kidneys (pyelonephritis)
- anthrax inhalation exposure

Truoxin I.V. may also be used to treat other specific severe infections in children and adolescents when your doctor considered this necessary.

2. What you need to know before you given Truoxin IV

Before taking this medicine
You should not take fluoroquinolone/quinolone antibacterial medicines, including Ciprofloxacin Hikma, if you have experienced any serious adverse reaction in the past when taking a quinolone or fluoroquinolone. In this situation, you should inform your doctor as soon as possible.

Do not use Truoxin I.V. if you are:
- If you are allergic to ciprofloxacin, to other quinolone drugs or any of the other ingredients of this medicine (listed in section 6)
- If you are taking tizanidine (see Section 2: Other medicines and Truoxin I.V.)

Warnings and precautions
Talk to your doctor before you are given Truoxin I.V.

Talk to your doctor before you are given Truoxin I.V.,
- if you have ever had kidney problems because your treatment may need to be adjusted,
- if you suffer from epilepsy or other neurological conditions.
- if you have a history of tendon problems during previous treatment with antibiotics such as Truoxin I.V.
- if you are diabetic because you may experience a risk of hypoglycaemia with ciprofloxacin.
- if you have myasthenia gravis (a type of muscle weakness) because symptoms can be exacerbated.
- If you have heart problems. Caution should be taken when using, if you were born with or have family history of prolonged QT interval (seen on ECG, electrical recording of the heart), have salt imbalance in the blood (especially low level of potassium or magnesium in the blood), have a very slow heart rhythm (called ‘bradycardia’), have a weak heart (heart failure), have a history of heart attack (myocardial infarction), you are female or elderly or you are taking other medicines that result in abnormal ECG changes (see Section 2: Other medicines and Truoxin I.V.).
- If you or a member of your family is known to have a deficiency in glucose-6-phosphate dehydrogenase (G6PD), since you may experience a risk of anaemia with ciprofloxacin.
- If you have been diagnosed with an enlargement or "bulge" of a large blood vessel (aortic aneurysm or large vessel peripheral aneurysm).
- If you have experienced a previous episode of aortic dissection (a tear in the aorta wall).
- If you have been diagnosed with leaking heart valves (heart valve regurgitation).

- If you have a family history of aortic aneurysm or aortic dissection or congenital heart valve disease, or other risk factors or predisposing conditions (e.g. connective tissue disorders such as Marfan syndrome or Ehlers-Danlos syndrome, Turner syndrome, Sjögren's syndrome [an inflammatory autoimmune disease], or vascular disorders such as Takayasu arteritis, giant cell arteritis, Behçet's disease, high blood pressure, or known atherosclerosis, rheumatoid arthritis [a disease of the joints] or endocarditis [an infection of the heart]).

For the treatment of some genital tract infections, your doctor can prescribe another antibiotic in addition to ciprofloxacin. If there is no improvement in symptoms after 3 days of treatment, please consult your doctor.

<u>While under treatment with Truoxin I.V.</u>

If you feel sudden, severe pain in your abdomen, chest or back, which can be symptoms of aortic aneurysm and dissection, go immediately to an emergency room. Your risk may be increased if you are being treated with systemic corticosteroids.

If you start experiencing a rapid onset of shortness of breath, especially when you lie down flat in your bed, or you notice swelling of your ankles, feet or abdomen, or a new onset of heart palpitations (sensation of rapid or irregular heartbeat), you should inform a doctor immediately.

Tell your doctor immediately, if any of the following occurs **during treatment with Truoxin I.V.** Your doctor will decide whether treatment with Truoxin I.V. needs to be stopped.

- **Severe, sudden allergic reaction** (an anaphylactic reaction/shock, angio-oedema). Even with the first dose, there is a rare chance that you may experience a severe allergic reaction with the following symptoms: tightness in the chest, feeling dizzy, feeling sick or faint, or experience dizziness on standing. **If this happens, tell your doctor immediately since the administration of Truoxin I.V. will have to be stopped.**

- **Pain and swelling in the joints, and inflammation or rupture of tendons may occur rarely.** Your risk is increased if you are elderly (above 60 years of age), have received an organ transplant, have kidney problems or if you are being treated with corticosteroids. Inflammation and ruptures of tendons may occur within the first 48 hours of treatment and even up to several months after stopping of Truoxin I.V. therapy. At the first sign of pain or inflammation of a tendon (for example in your ankle, wrist, elbow, shoulder or knee), stop taking Truoxin I.V., contact your doctor and rest the painful area. Avoid any unnecessary exercise as this might increase the risk of a tendon rupture.

- Prolonged, disabling and potentially irreversible serious side effects
  Fluoroquinolone/quinolone antibacterial medicines, including Truoxin I.V., have been associated with very rare but serious side effects, some of them being long lasting (continuing months or years), disabling or potentially irreversible. This includes tendon, muscle and joint pain of the upper and lower limbs, difficulty in walking, abnormal sensations such as pins and needles, tingling, tickling, numbness or burning (paraesthesia), sensory disorders including impairment of vision, taste and smell, and hearing, depression, memory impairment, severe fatigue, and severe sleep disorders.

If you experience any of these side effects after taking Truoxin I.V., contact your doctor immediately prior to continuing treatment. You and your doctor will decide on continuing the treatment considering also an antibiotic from another class.

- If you suffer from **epilepsy** or other **neurological conditions** such as cerebral ischemia or stroke, you may experience side effects associated with the central nervous system. If this happens, stop taking Truoxin I.V. and contact your doctor immediately.

- • You may experience **psychiatric reactions** after first administration of ciprofloxacin. If you suffer from **depression** or **psychosis**, your symptoms may become worse under treatment with Truoxin I.V. In rare cases, depression or psychosis can progress to thoughts of suicide, suicide attempts, or completed suicide. If this happens, stop taking Truoxin I.V. and contact your doctor immediately.

- You may rarely experience symptoms of nerve damage (neuropathy) such as pain, burning, tingling, numbness and/or weakness especially in the feet and legs or hands and arms. If this happens, stop taking Truoxin I.V. and inform your doctor immediately in order to prevent the development of potentially irreversible condition.

- Quinolone antibiotics may cause an increase of your blood sugar levels above normal levels (hyperglycaemia), or lowering of your blood sugar levels below normal levels, potentially leading to loss of consciousness (hypoglycaemic coma) in severe cases (see section 4). This is important for people who have diabetes. If you suffer from diabetes, your blood sugar should be carefully monitored.

- **Diarrhoea** may develop while you are on antibiotics, including Truoxin I.V., or even several weeks after you have stopped using them. If it becomes severe or persistent or you notice that your stool contains blood or mucus tell your doctor immediately. Truoxin I.V. treatment will have to be stopped immediately, as this can be life-threatening. Do not take medicines that stop or slow down bowel movements.

- Tell the doctor or laboratory staff that you are taking Truoxin I.V. if you have to provide a **blood or urine sample**.

- The use of Truoxin I.V. may lead to the formation of crystals in the urine. You should drink plenty of water and avoid excessive alkalinity of the urine.

- Truoxin I.V. may cause **liver damage**. If you notice any symptoms such as loss of appetite, jaundice (yellowing of the skin), dark urine, itching, or tenderness of the stomach, Truoxin I.V. must be stopped immediately.

- Truoxin I.V. may cause a reduction in the number of white blood cells and your **resistance to infection may be decreased**. If you experience an infection with symptoms such as fever and serious deterioration of your general condition, or fever with local infection symptoms such as sore throat/pharynx/mouth or urinary problems you should see your doctor immediately. A blood test will be taken to check possible reduction of white blood cells (agranulocytosis). It is important to inform your doctor about your medicine.

- If you suffer from kidney problems, tell the doctor because your dose may need to be adjusted.

- Your skin becomes more **sensitive to sunlight or ultraviolet (UV) light** under treatment with Truoxin I.V. Avoid exposure to strong sunlight or artificial UV light such as sunbeds.

- If your eyesight becomes impaired or if your eyes seem to be otherwise affected, consult an eye specialist immediately.

Other medicines and Truoxin I.V.
Tell your doctor or pharmacist if you are taking or have recently taken or might take any other medicines.

You must tell your doctor if you are taking other medicines that can alter your heart rhythm: medicines that belong to the group of anti-arrhythmics (e.g. quinidine, hydroquinidine, disopyramide, amiodarone, sotalol, dofetilide, ibutilide), tricyclic antidepressants, some antimicrobials (that belong to the group of macrolides), some antipsychotics.

Do not use Truoxin I.V. together with tizanidine, because this may cause side effects such as low blood pressure and sleepiness (see Section 2: You must not be given).

The following medicines are known to interact with Truoxin I.V. in your body. Using Truoxin I.V. together with these medicines can influence their therapeutic effect of these medicines. It can also increase the probability of experiencing side effects.

Tell your doctor if you are taking:
- vitamin K antagonists (e.g. warfarin, acenocoumarol, phenprocoumon or fluindione) or other oral anti-coagulants (to thin the blood)
- probenecid (for gout)
- methotrexate (for certain types of cancer, psoriasis, rheumatoid arthritis)
- theophylline (for breathing problems)
- tizanidine (for muscle spasticity in multiple sclerosis)
- olanzapine (an antipsychotic)
- clozapine (an antipsychotic)
- ropinirole (for Parkinson's disease)
- phenytoin (for epilepsy)
- cyclosporin (for skin conditions, rheumatoid arthritis and in organ transplantation)
- other medicines that can alter your heart rhythm: medicines that belong to the group of anti-arrhythmics (e.g. quinidine, hydroquinidine, disopyramide, amiodarone, sotalol, dofetilide, ibutilide), tricyclic antidepressants, some antimicrobials (that belong to the group of macrolides), some antipsychotics.

Truoxin I.V. may **increase** the levels of the following medicines in your blood:
- pentoxifylline (for circulatory disorders)
- caffeine
- duloxetine (for depression, diabetic nerve damage or incontinence)
- lidocaine (for heart conditions or anaesthetic use)
- sildenafil (e.g. for erectile dysfunction)
- agomelatine

- zolpidem

Taking Truoxin I.V. with food and drink
Food and drink does not affect your treatment with Truoxin I.V.

Pregnancy and breast-feeding
If you are pregnant or breast-feeding, think you may be pregnant or are planning to have a baby, ask your doctor or pharmacist for advice before taking this medicine.
It is preferable to avoid the use of Truoxin I.V. during pregnancy.

Do not take Truoxin I.V. during breast feeding because ciprofloxacin is excreted in breast milk and can be harmful for your child.

Driving and using machines
Truoxin I.V. may make you feel less alert. Some neurological adverse events can occur. Therefore, make sure you know how you react to Truoxin I.V. before driving a vehicle or operating machinery. If in doubt, talk to your doctor.

Truoxin I.V. contains sodium
If you are on a low-sodium diet, take into account that 100 ml of Truoxin I.V. contains 15.4 mmol (equivalent to 354 mg) sodium.

3. How to use Truoxin IV

Your doctor will explain to you exactly how much Truoxin I.V. you will be given as well as how often and for how long. This will depend on the type of infection you have and how bad it is.

Tell your doctor if you suffer from kidney problems because your dose may need to be adjusted.

Treatment usually lasts between 5 and 21 days but may be longer for severe infections.

Your doctor will give you each dose by slow infusion through a vein into your bloodstream. For children, the infusion duration is 60 minutes. In adult patients, infusion time is 60 minutes for 400 mg Truoxin I.V. and 30 minutes for 200 mg Truoxin I.V. Administering the infusion slowly helps prevent immediate side effects occurring.

Remember to drink plenty of fluids while you are taking this medicine.

If you stop using Truoxin I.V.

It is important that you **finish the course of treatment** even if you begin to feel better after a few days. If you stop using this medicine too soon your infection may not be completely cured and the symptoms of the infection may return or get worse. You might also develop resistance to the antibiotic.

If you have any further questions on the use of this product, ask your doctor or pharmacist.

4. Possible side effects

Like all medicines, this medicine can cause side effects, although not everybody gets them.

If you experience the following side effects, contact your doctor immediately (see section 2 Warnings and precautions):
- Severe, sudden allergic reaction (an anaphylactic reaction/shock, angio-oedema).
- Pain and swelling in the joints, and tendinitis
- Side effects associated with the central nervous system, if you suffer from epilepsy or other neurological conditions
- Psychiatric reactions after first administration of ciprofloxacin, if you suffer from depression or psychosis
- Symptoms of neuropathy such as pain, burning, tingling, numbness and/or weakness.
- Hypoglycemia if you are diabetic
- Severe or persistent diarrhoea or you notice that your stool contains blood or mucus
- Loss of appetite, jaundice (yellowing of the skin), dark urine, itching, or tenderness of the stomach
- Infection with symptoms such as fever and serious deterioration of your general condition, or fever with local infection symptoms such as sore throat/pharynx/mouth or urinary problems
- Impairment of your eyesight or if your eyes seem to be otherwise affected.

Common side effects (may affect up to 1 in 10 people):
- nausea, diarrhoea, vomiting
- joint pains in children
- local reaction at the injection site, rash
- temporary increased amounts of substances in the blood (transaminases)

Uncommon side effects (may affect up to 1 in 100 people):
- fungal superinfections
- a high concentration of eosinophils, a type of white blood cell, increased or decreased amounts of a blood cloting factor (thrombocytes)
- decreased appetite
- hyperactivity, agitation, confusion, disorientation, hallucinations
- headache, dizziness, sleeping problems, taste disorders, pins and needles, unusual sensitivity to stimuli of the senses, seizures (see Section 2: Warnings and precautions), giddiness
- eyesight problems including double vision
- loss of hearing
- rapid heartbeat (tachycardia)
- expansion of the blood vessels (vasodilation), low blood pressure
- abdominal pain, digestive problems such as stomach upset (indigestion/heartburn), wind
- liver disorders, increased amounts of one substance in the blood (bilirubin), jaundice (cholestatic icterus)
- itching, hives
- joint pain in adults
- poor kidney function, kidney failure
- pains in your muscles and bones, feeling unwell (asthenia), fever, fluid retention

- increase in blood alkaline phosphatase (a certain substance in the blood)

Rare side effects (may affect up to 1 in 1,000 people):
- inflammation of the bowel (colitis) linked to antibiotic use (can be fatal in rare cases) (see Section 2: Warnings and precautions)
- changes to the blood count (leukopenia, leukocytosis, neutropenia, anaemia), a drop in the number of red and white blood cells and platelets (pancytopenia), which may be fatal, bonemarrow depression which may also be fatal (see Section 2: Warnings and precautions)
- allergic reaction, allergic swelling (oedema), rapid swelling of the skin and mucous membranes (angiooedema), severe allergic reaction (anaphylactic shock) which can be life-threatening (see Section 2: Warnings and precautions)
- increased blood sugar (hyperglycemia)
- decreased blood sugar (hypoglycaemia) (see Section 2: Warnings and precautions)
- anxiety reaction, strange dreams, depression (potentially leading to thoughts of suicide, suicide attempts, or completed suicide), mental disturbances (psychotic reactions potentially leading to thoughts of suicide, suicide attempts, or completed suicide) (see Section 2: Warnings and precautions)
- decreased skin sensitivity, tremor, migraine, disorder of sense of smell (olfactory disorders)
- tinnitus, impaired hearing
- fainting, inflammation of the blood vessel (vasculitis)
- shortness of breath including asthmatic symptoms
- pancreatitis
- hepatitis, death of liver cells (liver necrosis) very rarely leading to life-threatening liver failure
- sensitivity to light (see Section 2: Warnings and precautions), small, pin-point bleeding under the skin (petechiae)
- muscle pain and/or weakness, inflammation of the joints and joint pain, increased muscle tone and cramping, inflammation of the tendons or tendon rupture, particularly affecting the large tendon at the back of the ankle (Achilles tendon) (see Section 2: Warnings and precautions)
- blood or crystals in the urine (see Section 2: Warnings and precautions), urinary tract inflammation
- excessive sweating
- increased levels of the enzyme amylase

Very rare side effects (may affect up to 1 in 10,000 people):
- a special type of reduced red blood cell count (haemolytic anaemia); a dangerous drop in a type of white blood cells (agranulocytosis)
- severe allergic reaction (anaphylactic reaction, anaphylactic shock, serum sickness) which can be fatal (see Section 2: Warnings and precautions)
- disturbed coordination, unsteady walk (gait disturbance), pressure on the brain (intracranial pressure and pseudotumor cerebri)
- visual colour distortions
- various skin eruptions or rashes (e.g. the potentially fatal Stevens-Johnson syndrome or toxic epidermal necrolysis)
- muscle weakness, tendon inflammation, worsening of the symptoms of myasthenia gravis (see Section 2: Warnings and precautions)

Not known (frequency cannot be estimated from the available data)
- unusual feelings of pain, burning tingling, numbness or muscle weakness in the extremities (neuropathy)- see section 2
- abnormal fast heart rhythm, life-threatening irregular heart rhythm, alteration of the heart rhythm (called 'prolongation of QT interval', seen on ECG, electrical activity of the heart)
- pustular rash
- influence on blood clotting (in patients treated with Vitamin K antagonists)
- feeling highly excited (mania) or feeling great optimism and overactivity (hypomania)
- hypersensitivity reaction called DRESS (Drug Reaction with Eosinophilia and Systemic Symptoms)
- Syndrome associated with impaired water excretion and low levels of sodium (SIADH)
- Loss of consciousness due to severe decrease in blood sugar levels (hypoglycaemic coma). See section 2.

Very rare cases of long lasting (up to months or years) or permanent adverse drug reactions, such as tendon inflammations, tendon rupture, joint pain, pain in the limbs, difficulty in walking, abnormal sensations such as pins and needles, tingling, tickling, burning, numbness or pain (neuropathy), depression, fatigue, sleep disorders, memory impairment, as well as impairment of hearing, vision, and taste and smell have been associated with administration of quinolone and fluoroquinolone antibiotics, in some cases irrespective of pre-existing risk factors.

Cases of an enlargement and weakening of the aortic wall or a tear in the aortic wall (aneurysms and dissections), which may rupture and may be fatal, and of leaking heart valves have been reported in patients receiving fluoroquinolones. See also section 2.

Reporting of side effects
If you get any side effects, talk to your doctor or pharmacist. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via:
HPRA Pharmacovigilance
Website: www.hpra.ie
By reporting side effects, you can help provide more information on the safety of this medicine.

5. How to store Truoxin I.V.

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

Do not use this medicine after the expiry date which is stated on the packaging after "EXP". The expiry date refers to the last day of that month.

Do not refrigerate or freeze.
Keep the vial/bag in the outer carton/aluminium overpouch until time of use in order to protect from light.

6. Contents of the pack and other information

What Truoxin I.V. contains
The active substance is ciprofloxacin lactate.
Each vial of 100 ml contains 200 mg of ciprofloxacin.
Each bag of 200 ml contains 400 mg of ciprofloxacin.

The other ingredients are lactic acid (E270), sodium chloride, hydrochloric acid (E507) for pH adjustment and water for injections.

What Truoxin I.V. looks like and contents of the pack
Truoxin I.V.is a sterile, clear and colourless to slightly yellow solution for infusion.
It is contained in a type I or II, clear, colourless glass vial containing 100 ml solution and/or a polypropylene infusion bag containing 200 ml solution.

Packs: 1, 5 or 10 vials of 100 ml.
Packs: 1 or 10 bags of 200 ml.

Marketing Authorization Holder and Manufacturer
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PA 1217/002/001 – Truoxin I.V. 200mg/100ml solution for infusion
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For any information about this medicine, please contact the the Marketing Authorisation Holder.

This medicinal product is authorised in the Member States of EEA under the following names:

Austria:	Ciprofloxacin Hikma 2 mg/ml Lösung zur Intravenösen Infusion
Germany:	Ciprofloxacin Hikma 2 mg/ml Infusionslösung
Ireland:	Truoxin I.V. 200mg/100ml solution for infusion Truoxin I.V. 400mg/200ml solution for infusion
Italy:	Ciprofloxacina Hikma 2 mg/ml Soluzione per Infusione
United Kingdom:	Ciprofloxacin 2 mg/ml Solution for Infusion
The Netherlands:	Ciprofloxacine Hikma 2 mg/ml Oplossing voor Intraveneuze Infusie

This leaflet was last revised in 11/2020

The following information is intended for medical or healthcare professionals only:

The solution should be visually inspected prior to use and only clear solutions, without particles, should be used.

The infusion contains no preservatives. For single use only. Any remaining solution and vials and/or bags should be adequately disposed of, in accordance with local requirements.

Truoxin I.V. is compatible with isotonic sodium chloride solution, Ringer's solution, Ringer's lactate solution, 50 mg/ml (5%) or 100 mg/ml (10%) glucose solution and 50 mg/ml (5%) glucose solution with 2.25 mg/ml (0.225%) or 4.5 mg/ml (0.45%) sodium chloride solution and 10% fructose solution. Compatibility with these solutions has been proven in ciprofloxacin concentrations of 1 mg/ml. Chemical and physical in-use stability has been demonstrated immediately after dilution, after 24 hours at 2-8°C and after 24 hours at room temperature. Unless compatibility is proven, the solution for infusion should always be administered separately.

The diluted solutions should be inspected visually for particulate matter and discoloration prior to administration. Only clear and colourless solutions should be used.

Handling glass vials:
Truoxin I.V. 200mg/100ml solution for infusion may be infused via a suitable cannula directly or diluted with any of the fluids in the list above.

Handling plastic bags:
Do not remove unit from overwrap until ready for use. The overwrap is a moisture barrier. The inner bag maintains the sterility of the product.

To open, tear overwrap down side at slit and remove solution container. Some opacity of the plastic due to moisture absorption during the sterilization process may be observed. This is normal and does not affect the solution quality or safety. The opacity will diminish gradually. After removing overwrap, check for minute leaks by squeezing inner bag firmly. If leaks are found, discard solution as sterility may be impaired.

CAUTION: Do not use plastic containers in series connections. Such use could result in air embolism due to residual air being drawn from the primary container before administration of the fluid from the secondary container is completed.

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