PACKAGE LEAFLET: INFORMATION FOR THE USER

Remifentanil 1 mg powder for concentrate for solution for injection/infusion

Remifentanil 2 mg powder for concentrate for solution for injection/infusion

Remifentanil 5 mg powder for concentrate for solution for injection/infusion

Remifentanil

Read all of this leaflet carefully before you start using this medicine because it contains important imformation for you.

- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor, pharmacist or nurse.
- This medicine has been prescribed for you only. 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 of the side effects talk to your doctor, pharmacist or nurse. This includes any side effects not listed in this leaflet, see section 4.

What is in this leaflet:

1. WHAT REMIFENTANIL IS AND WHAT IT IS USED FOR

Remifentanil belongs to a group called opioids. It differs from other medicines in this group by its very quick onset and very short duration of action.

- Remifentanil may be used to stop you feeling pain before or while you are having an operation.
- Remifentanil may be used to relieve pain while you are under controlled mechanical ventilation in an Intensive Care Unit (for patients 18 years of age and over).

2. WHAT YOU NEED TO KNOW BEFORE YOU USE REMIFENTANIL

Do not use Remifentanil

- if you are allergic (hypersensitive) to remifentanil, any of the other ingredients of this medicine (see list of ingredients in Section 6) or fentanyl derivates (such as alfentanil, fentanyl, sufentanil). An allergic reaction may include rash, itching, difficulty of breathing or swelling of the face, lips, throat or tongue. You may know this from earlier experience
- as injection into the spinal canal
- as sole medicine to initiate anaesthesia

- **Warnings and precautions**
- Talk to your doctor, pharmacist or nurse before using Remifentanil:ever had any adverse reactions during an operation
- ever had any allergic reactions or if you have been told that you are allergic to:
    - any medicines used during an operation
    - opioid medicines (e.g., morphine, fentanyl, pethidine, codeine) , see also section above **"Do not use Remifentanil"**
- suffer from impaired lung and/or liver function (you may be more sensitive for breathing difficulties)

Elderly or weak patients (caused by decreased blood volume and/or low blood pressure) are more sensitive to suffer from cardiac or circulatory disturbances.

- As with other opioids remifentanil may produce dependency.
- Following anaesthesia with Remifentanil, you should leave home only accompanied and you should not drink alcohol.
- Remifentanil should be administered only in a setting fully equipped for the monitoring and support of respiratory and cardiovascular function, and by persons specifically trained in the use of anaesthetic medicines and the recognition and management of the expected adverse effects of potent opioids, including respiratory and cardiac resuscitation.
- In ventilated intensive care patients the use of Remifentanil for more than 3 days is not recommended.
- Due to the rapid offset of action of remifentanil, patients may emerge rapidly from anaesthesia and no residual opioid activity will be present within 5-10 minutes after the discontinuation of Remifentanil. For those patients undergoing surgical procedures where post-operative pain is anticipated, analgesics should be administered prior to discontinuation of Remifentanil
- At the doses recommended muscle rigidity may occur. As with other opioids, the incidence of muscle rigidity is related to the dose and rate of administration. Therefore, bolus injections should be administered over not less than 30 seconds.

Hypotension and bradycardia may be managed by reducing the rate of infusion of Remifentanil or the dose of concurrent anaesthetics or by using intravenous fluids, vasopressor or anticholinergic agents.

Drug abuse
As with other opioids remifentanil may produce dependency.

Children
Remifentanil is not recommended in neonates and infants (children under the age of one year). There is little experience of use of Remifentanil to treat children in intensive care units.

Elderly
If used for an operation under general anaesthesia, the initial dose of Remifentanil should be appropriately reduced in elderly patients.

Other medicines and Remifentanil

Please tell your doctor if you are taking or have recently taken any other medicines, including medicines obtained without a prescription.

This is especially important with the following medicines as they may interact with your Remifentanil:

- medicines for blood pressure or heart problems (known as beta-blockers or calcium channel blockers). These medicines may increase the effect of Remifentanil on your heart (lowering of your blood pressure and your heart beat).
- other sedative medicines, such as benzodiazepines. Your doctor or pharmacist will alter the dose of these medicines when you are being given Remifentanil.

It may still be all right for you to receive Remifentanil and your doctor will be able to decide what is suitable for you.

Remifentanil is not metabolized by plasmacholinesterase, therefore, interactions with medicines metabolized by this enzyme are not anticipated.

Remifentanil with food, drink and alcohol

After having received Remifentanil you should not drink alcohol until fully recovered.

Pregnancy, breast-feeding and fertility

If you are pregnant or breast-feeding, think you may be pregnant or are planning to have a baby, ask your doctor for advice before this medicine is given to you.

Your doctor will discuss the possible risks and benefits of being given Remifentanil if you are pregnant or breast-feeding.

Remifentanil should not be given to pregnant women unless medically justified. Remifentanil is not recommended during labour or a Caesarian section.

It is recommended that you stop breast-feeding for 24 hours after Remifentanil has been given to you.

Driving and using machines

This medicine is only used in hospitalized patients. If you are discharged early, after you have been given Remifentanil, you must not drive, operate machinery, or work in dangerous situations. You should not go home alone. Your doctor will advise you when it is safe to resume these activities.

Remifentanil contains:

This medicinal product contains less than 1 mmol sodium (23 mg) per ml, i.e. essentially 'sodium-free'.

3. HOW TO HAVE REMIFENTANIL

How your injection is given
You will never be expected to give yourself this medicine. It will always be given to you by a person who is qualified to do so.

Remifentanil can be given:
• as a single injection into your vein
• as a continuous infusion into your vein. This is where the drug is slowly given to you over a longer period of time.

The way you are given the drug and the dose you receive will depend on:
• your weight
• the operation you have
• how much pain you will be in
• how sleepy the medical staff want you to be in the Intensive Care Unit. The dose varies from one patient to another.

If you are given too much
The effects of Remifentanil are carefully monitored throughout your operation and in intensive care, and appropriate action will be taken promptly if you receive too much.

After your operation
Tell your doctor or nurse if you are in pain. If you are in pain after your procedure, they will be able to give you other painkillers.

4. POSSIBLE SIDE EFFECTS

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

The following side effects have been reported:

Very common (may affect more than 1 in 10 people)
- muscle stiffness
- feeling sick (nausea)
- being sick (vomiting)
- low blood pressure (hypotension)

Common (may affect up to 1 in 10 people)

- slow heart beat (bradycardia)
- shallow breathing (respiratory depression)
- breathing stops (apnoea)

- itching
- shivering after the operation
- high blood pressure (hypertension) after the operation

Uncommon (may affect up to 1 to 100 people)

- constipation
- pain after the operation
- oxygen deficiency (hypoxia)

Rare (may affects up to 1 in 1000 people)

- slow heart beat followed by heart block in patients receiving remifentanil with one or more anaesthetic medicines
- sleepiness (during recovering from the operation)
- severe allergic reactions including shock, circulatory failure and heart attack in patients receiving remifentanil with one or more anaesthetic medicines

Not known (frequency cannot be estimated from the available data)

- fits
- abnormal heart rhythm due to heart block
- remifentanil having less effect than normal (drug tolerance)

As with other medicines of this class (opioids), long-term use of Remifentanil can lead to dependence. Please ask your doctor for advice.

Reporting of side effects

If you get any side effects, talk to your doctor. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via

HPRA Pharmacovigilance
Earlsfort Terrace
IRL - Dublin 2
Tel: +353 1 6764971
Fax: +353 1 6762517
Website: www.hpra.ie
e-mail: medsafety@hpra.ie

By reporting side effects you can help provide more information on the safety of this medicine.

5. HOW TO STORE REMIFENTANIL

Keep out of the reach and sight of children.

Do not use Remifentanil after the expiry date which is stated on the carton / vial after “EXP”. The expiry date refers to the last day of that month.

Unopened medicinal product

1 mg: Do not store above 25° C.

2 mg: Do not store above 30° C.

5 mg: Do not store above 30° C.

Do not refrigerate or freeze.

1 mg: Keep the vial in the outer carton in order to protect from light.

Reconstituted/diluted medicinal product

After reconstitution:

After reconstitution, chemical and physical in-use stability has been demonstrated for 24 hours at 25°C.

From a microbiological point of view, unless the method of reconstitution precludes the risk of microbial contamination, the product should be used immediately. If not used immediately, in-use storage times and conditions prior to use are the responsibility of the user.

After dilution:

Following dilution, the solution must be inspected visually to ensure that it is clear, colourless and virtually free from solids, and that there is no damage to the vials. If such changes are detected, the solution must be discarded.

The diluted product should be used immediately.

The diluted solution is for single use only.

Any unused solution must be discarded.

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.

6. CONTENT OF THE PACK AND OTHER INFORMATION

What Remifentanil contains

The active substance is:

remifentanil (as hydrochloride)

1 mg: 1 vial contains 1 mg remifentanil (as remifentanil hydrochloride).

2 mg: 1 vial contains 2 mg remifentanil (as remifentanil hydrochloride).

5 mg: 1 vial contains 5 mg remifentanil (as remifentanil hydrochloride).

After reconstitution the solution contains 1 mg/ml remifentanil (as hydrochloride), if prepared as recommended.

The other ingredients are:

glycine; hydrochloric acid (for pH adjustment); sodium hydroxide (for pH adjustment)

What Remifentanil looks like and contents of the pack

Remifentanil 1/ 2/ 5 mg is a lyophilized white to slightly yellow cake or powdery mass for concentrate for solution for injection/infusion.

Each carton of Remifentanil 1 mg contains 5 vials of 3.5 ml.

Each carton of Remifentanil 2 mg contains 5 vials of 3.5 ml.

Each carton of Remifentanil 5 mg contains 5 vials of 8 ml.

Marketing Authorisation Holder

Hospira UK Limited, Queensway, Royal Leamington Spa, Warwickshire, CV31 3RW, UK

Manufacturer

Elaiapharm, 2881 route des Crêtes, Z.I. Les Bouillides, Sophia Antipolis, 06560 Valbonne, France

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

Germany	Remifentanil Hospira 1/ 2/ 5 mg Pulver für ein Konzentrat zur Herstellung einer Injektions-/ Infusionslösung

Austria	Remifentanil Pfizer 1/ 2/ 5 mg Pulver für ein Konzentrat zur Herstellung einer Injektions- oder Infusionslösung
Belgium	Remifentanil Hospira 1/ 2/ 5 mg poeder voor concentraat voor oplossing voor injectie of infusie
Bulgaria	Remifentanil Hospira 1/ 2/ 5 mg прах за концентрат за инжекционен/ инфузионен разтвор
Czech Republic	Remifentanil Hospira 1/ 2/ 5 mg
Cyprus	Remifentanil Hospira 1/ 2/ 5 mg powder for concentrate for solution for injection/ infusion
Denmark	Remifentanil Hospira 1/ 2/ 5 mg pulver til koncentrat til injektions- og infusionsvæske, opløsning
Estonia	Remifentanil Hospira 1/ 2/ 5 mg süste- või infusioonilahuse kontsentraadi pulber
Greece	Remifentanil Hospira 1/ 2/ 5 mg κόνις για παρασκευή πυκνού διαλύματος για παρασκευή ενέσιμου διάλυματος ή διαλύματος προς έγχυση
Finland	Remifentanil Hospira 1/ 2/ 5 mg kuiva-aine välikonsentraatiksi injektio-/infuusionestettä varten, liuos
France	Remifentanil Hospira 1/ 2/ 5 mg poudre pour solution injectable /pour perfusion
Hungary	Remifentanil Hospira 1/ 2/ 5 mg por oldatos injekcióhoz vagy infúzióhoz való koncentrátumhoz
Iceland	Remifentanil Hospira 1/ 2/ 5 mg stofn fyrir stungulyfs/innrennslisþykkni, lausn
Ireland	Remifentanil 1/ 2/ 5 mg powder for concentrate for solution for injection/ infusion
Italy	Remifentanil Hospira Pharma 1/ 2/ 5 mg polvere per concentrato per soluzione iniettabile o per infusione
Latvia	Remifentanil Hospira 1/ 2/ 5 mg pulveris injekciju vai infūziju šķīduma koncentrāta pagatavošanai
Lithuania	Remifentanil Hospira 1/ 2/ 5 mg milteliai injekcinio ar infuzinio tirpalo koncentratui
Luxembourg	Remifentanil Hospira 1/ 2/ 5 mg Pulver für ein Konzentrat zur Herstellung einer Injektions-/Infusionslösung
Malta	Remifentanil Hospira 1/ 2/ 5 mg powder for concentrate for solution for injection or infusion
Netherlands	Remifentanil Hospira 1/ 2/ 5 mg poeder voor concentraat voor oplossing voor infusie/injectie
Norway	Remifentanil Hospira 1/ 2/ 5 mg pulver til konsentrat til injeksjons- / infusionsvæske, oppløsning
Poland	Remifentanil Hospira
Portugal	Remifentanil Hospira
Romania	Remifentanil Hospira 1/ 2/ 5 mg pulbere pentru concentrat pentru soluţie injectabilă/perfuzabilă

Slovak Republic	Remifentanil Hospira 1/ 2/ 5 mg prášok na injekčný/ infúzny koncentrát
Spain	Remifentanilo Hospira 1/ 2/ 5 mg polvo para concentrado para solución inyectable o para perfusion EFG
Sweden	Remifentanil Hospira 1/ 2/ 5 mg pulver till koncentrat till injektions- / infusionsvätska, lösning
Slovenia	Remifentanil Hospira 1/ 2/ 5 mg prašek za koncentrat za raztopino za injiciranje/infundiranje
United Kingdom	Remifentanil 1/ 2/ 5 mg powder for concentrate for solution for injection/ infusion

This leaflet was last revised in 12/2016 **Ref: gxRE1_0**

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

INSTRUCTIONS ON USE/HANDLING OF REMIFENTANIL 1, 2 and 5 mg POWDER FOR CONCENTRATE FOR SOLUTION FOR INFUSION/INJECTION

FOR INTRAVENOUS USE ONLY

Remifentanil should be prepared for intravenous use by adding the appropriate volume (as stated in the table below) of one of the below listed diluents to give a reconstituted solution with a concentration of approximately 1mg/ml.

Presentation	Volume of diluent to be added	Concentration of the reconstituted solution
Remifentanil 1 mg	1 ml	1 mg/ml
Remifentanil 2 mg	2 ml	1 mg/ml
Remifentanil 5 mg	5 ml	1 mg/ml

Following reconstitution, the product must be inspected visually (as far as supported by the vial) for solids, discoloration or damage to the vials. If such changes are detected, the solution must be discarded. The finished solution is for single use only. Unused solution must be discarded.

For manually-controlled infusion, Remifentanil should be administered following further dilution to a concentration of 20 to 250 micrograms/ml (50 micrograms/ml is the recommended dilution for adults and 20 to 25 micrograms/ml for paediatric patients aged 1 year and over).

For target controlled infusion (TCI), Remifentanil should be administered following further dilution to a concentration of 20 to 50 micrograms/ml.

Dilution should be adjusted to the technical equipment of the infusion system and the expected patient requirements.

For dilution, one of the following IV fluids listed below should be used:
Water for Injections
Glucose 50 mg/ml (5%) solution for Injection
Glucose 50 mg/ml (5%) and sodium chloride 9 mg/ml (0.9%) solution for injection
Sodium chloride 9 mg/ml (0.9%) solution for injection
Sodium chloride 4.5 mg/ml (0.45%) solution for injection

Remifentanil has been shown to be compatible with the following IV fluids when administered into a running IV catheter:

Lactated Ringer's solution for injection
Lactated Ringer's and Glucose 50 mg/ml (5%) solution for injection

Remifentanil has been shown to be compatible with propofol when administered into a running IV catheter.

Any unused product or waste material should be disposed of in accordance with local requirements.

For full prescribing information refer to the Summary of Product Characteristics.