PACKAGE LEAFLET: INFORMATION FOR THE USER

Remifentanil 1 mg powder for concentrate for solution for injection or infusion
Remifentanil 2 mg powder for concentrate for solution for injection or infusion
Remifentanil 5 mg powder for concentrate for solution for injection or infusion
Remifentanil (as hydrochloride)

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Remifentanil

Read all of this leaflet carefully before you start using this medicine because it contains important information for you.
- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor or pharmacist.
- If you get any side effects, talk to your doctor. This includes any possible 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
2. What you need to know before you use Remifentanil
3. How to use Remifentanil
4. Possible side effects
5. How to store Remifentanil
6. Contents of the pack and other information

1. WHAT REMIFENTANIL IS AND WHAT IT IS USED FOR

Remifentanil contains a medicine called remifentanil. This belongs to a group of medicines known as opioids which are used to reduce pain. 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 SHOULD KNOW BEFORE YOU USE REMIFENTANIL

Do not use Remifentanil
if you are allergic to remifentanil. fentanyl derivates (such as alfentanil. fentanyl sufentanil) or any of the other ingredients of this medicine (listed in section 6).
as injection into the spinal canal
as sole medicine to initiate anaesthesia

If you are not sure if any of the above apply to you. talk to your doctor. pharmacist or nurse before you are given Remifentanil .

Warnings and precautions
Talk to your doctor before Remifentanil is given to you if you:
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.

If you are not sure if any of the above apply to you. talk to your doctor or nurse before you are given Remifentanil .

Other medicines and Remifentanil
Tell your doctor or pharmacist if you are taking. have recently taken or might take any other medicines including medicines obtained without a prescription. This includes herbal medicines.
In particular tell your doctor or pharmacist if you are taking:
- medicines for blood pressure or heart problems (known as beta-blockers or calcium channelblockers). These medicines may increase the effect of Remifentanil on your heart (lowering of your blood pressure and your heart beat).

Concomitant use of Remifentanil and sedative medicines such as benzodiazepines or related drugs increases the risk of drowsiness. difficulties in breathing (respiratory depression). coma and may be life-threatening. Because of this. concomitant use should only be considered when other treatment options are not possible.

However. if your doctor does prescribe Remifentanil together with sedative medicines the dose and duration of concomitant treatment should be limited by your doctor.

Please tell your doctor about all sedative medicines you are taking. and follow your doctor's dose recommendation closely. It could be helpful to inform friends or relatives to be aware of the signs and symptoms stated above. Contact your doctor when experiencing such symptoms.

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

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.

Container
The bromobutyl rubber stopper of this product contains latex rubber which should be taken into consideration when piercing the stopper as rubber latex may cause severe allergic reactions at administration in persons having hypersensitivity for latex.

Taking Remifentanil with food and drink
After having received Remifentanil you should not drink alcohol until fully recovered.

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 nurse for advice before you are given this medicine.

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

It is recommended that you stop breast-feeding for 24 hours after Remifentanil has been given to you. In the case that you have expressed breast-milk. discard this and do not give it to your baby.

Driving and using machines
If you are only staying in hospital for the day of surgery, your doctor will tell you how long to wait before leaving the hospital or driving a car. It can be dangerous to drive too soon after having an operation. It is recommended that you arrange for someone to accompany you home from the hospital.

3. HOW TO USE REMIFENTANIL

Remifentanil must only be given under carefully controlled conditions and emergency equipment has to be available. Remifentanil will be given by or under the supervision of an experienced doctor who is familiar with the use and action of the type of medicine.
You will never be expected to give yourself this medication. 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:
- the operation or the treatment in the Intensive Care Unit you will have
- how much pain you will be in

The dose varies from one patient to another.

In patients with impaired liver or kidney function and in patients undergoing neurosurgery a dose reduction will not be necessary.

4. POSSIBLE SIDE EFFECTS

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

Hypersensitivity reactions including anaphylactic reactions: These are rare (may affect up to 1 in 1.000 people) in patients. who are given Remifentanil.
Signs are:
- lumpy skin rash or hives anywhere on the body
- swelling of your eyelids, face, lips, mouth or tongue (angioedema) which may cause breathing difficulties
- collapse.

You must tell your doctor or nurse immediately if you suffer from any of these symptoms.

The following information is intended for healthcare professionals only:

PREPARATION GUIDE for
Remifentanil 1mg powder for concentrate for solution for injection or infusion
Remifentanil 2 mg powder for concentrate for solution for injection or infusion
Remifentanil 5 mg powder for concentrate for solution for injection or infusion

It is important that you read the entire contents of this guide prior to the preparation of this medicinal product.

Remifentanil should not be administered without further dilution after reconstitution of the lyophilized powder.

Reconstitution
Remifentanil 1 mg / 2 mg / 5 mg 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 1 mg/ml.

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

Shake until completely dissolved. The reconstituted solution should be clear, colourless and free of visible particles.

Further Dilution
After reconstitution, Remifentanil should not be administered without further dilution to concentrations 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) with one of the following IV fluids listed below.
For target controlled infusion (TCI) the recommended dilution of Remifentanil is 20 to 50 micrograms/mi.

The dilution is dependent upon the technical capability of the infusion device and the anticipated requirements of the patient.
One of the following solutions should be used for dilution:
Water for Injections
Glucose 50 mg/ml (5 %) solution for injection
Glucose 50 mg/ml (5 %) solution for injection 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

The following intravenous fluids may also be used when administered into a running IV catheter:
Lactated Ringer's Injection
Lactated Ringer's and glucose 50 mg/ml (5 %) solution for injection

Remifentanil is compatible with propofol when administered into a running IV catheter.

No other diluents should be used.
The solution is to be inspected visually for particulate matter prior to administration. The solution should only be used if the solution is clear and free from particles.

Ideally, intravenous infusions of Remifentanil should be prepared at the time of administration.
Chemical and physical in-use stability has been demonstrated for 24 hours at 25°C.
From a microbiological point of view, 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 and would normally not be longer than 24 hours at 2 to 8°C, unless reconstitution has taken place in controlled and validated aseptic conditions.

The content of the vial is for single use only. Any unused product or waste material should be disposed of in accordance with local requirements.

Special precautions for storage
Do not store above 25°C.
Do not refrigerate or freeze.

For storage condition of the reconstituted/diluted medicinal product, see section above under Further dilution.

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

Uncommon (may affect up to 1 in 100 people)
• constipation
- oxygen deficiency (hypoxia)

Rare (may affect up to 1 in 1.000 people)
• slow heart beat followed by heart block in patients receiving remifentanil with one or more anaesthetic medicines

Not known (freguency cannot be estimated from the available datal
• physical need for Remifentanil *(drug dependency)* or the need for increasing doses over time to get the same effect *(drug tolerance)*
- fits (seizures)
- a type of irregular heartbeat *(atrioventricular block)*

Other side effects that can happen when you wake up after hiving an anaesthetic Include:

Common (may affect up to 1 in 10 people)
- shivering
• increased blood pressure (hypertension)

Uncommon (may affect up to 1 in 100 people)
- aches

Rare (may affect up to 1 in 1,000 people)
• feeling very calm or drowsy (sedation)

Other side effects which occurred particularly upon abrupt cessation of RemIfentInIlafter prolonCJed admInistmion of more than 3 days
faster heart beat *(tachycardia)*
- high blood pressure *(hypertension)*
• restlessness *(agitation)*

Reporting of side effects
If you get any side effects,talk to your doctor, pharmacist or nurse.This includes any possible side effects not listed in this leaflet.

For UK- You can also report side effects directly via the Yellow Card Scheme at:www.mhra.gov.uk/yellowcard

For Ireland- Via;
HPRA Pharmacovigilance
Earlsfort Terrace
IRL- Dublin 2
Tel:+3531676 4971
Fax:+3531676 2517

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

5. HOW TO STORE REMIFENTANIL

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 label and carton. The expiry date refers to the last day of that month.

Do not store above 25"C.
Do not refrigerate or freeze.

Do not use this medicine if you notice the solution is not clear and free of particles or if the container is damaged.

Do not throw away any medicines via wastewater or household waste. Ask your pharmacist how to throw away medicines you no longer use. These measures will help protect the environment.

6. CONTENTS OF THE PACK AND OTHER INFORMATION

What RemIfentanll contains

- The active substance is remifentanil.
- The other ingredients are glycine and hydrochloric acid.

Each vialcontains either 1mg,2 mg or 5 mg of remifentanil (as hydrochloride). After reconstitution as directed each mlcontains 1mg remifentanil.

What RemIfentanlllooks like and contents of the pack

Remifentanil is a white to off white or yellowish powder for concentrate for solution for injection or infusion. It is supplied in colourless glass vials.

Package size:
Remifentanil1mg powder for concentrate for solution for injection or infusion: 1or 5 vials per pack
Remifentanil 2 mg powder for concentrate for solution for injection or infusion: 1or 5 vials per pack
Remifentanil 5 mg powder for concentrate for solution for injection or infusion: 1or 5 vials per pack

Not all pack sizes may be marketed.

Marketing Authorisation Holder and Manufacturer

Marketing Authorisation Holder

For UK
Fresenius Kabi Limited
Cestrian Court,
Eastgate Way,
Manor Park, Runcorn,Cheshire,WA7 1NT, UK

For IRL
Fresenius Kabi Deutschland GmbH
Else-Kroener Strasse 1,
Bad Homburg v.d.H. 61352,
Germany

Manufacturer
Fresenius Kabi Deutschland GmbH
D-61346 Bad Homburg v.d.H., Germany

This medicinal product Is authorised In the Member States of the EEA under the following names:

Belgium.The Netherlands	Remifentanil Fresenius 1mg (2 mg,5 mg),poeder voor concentraat voor oplossing voor injectie of infusie
Denmark	RemifentanilFresenius
Germany, Austria	Remifentanil1mg (2mg,5 mg) Pulver zur Herstellung eines Konzentrats fUr eine Injektions- oder Infusionsl1lsung
Estonia	Remifentanil
France	Remifentanil1mg (2 mg, 5 mg),poudre pour solution injectable ou pour perfusion
Ireland, Malta, United Kingdom	Remifentanil1mg (2 mg, 5 mg) powder for concentrate for solution for injection or infusion
Latvia	Remifentanil1mg (2 mg, 5 mg) pulveris injekciju vai infuziju !duma koncentrata pagatavo anai
lithuania	Remifentanil1mg (2 mg, 5 mg) milteliaiinjekcinio ar infuzinio tirpalo koncentratui
Portugal	Remifentanilo
Romania	Remifentanil1mg (2 m2, 5 mg),pulbere pentru concentrat pentru solutie injectabila/perfuzabila
Spain	Remifentanilo 1mg (2 mg,5 mg) polvo para concentrado para soluci6n inyectable o para perfusi6n

This leaflet was last revised in 12/2019.

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