PACKAGE LEAFLET: INFORMATION FOR THE USER

Pethidine Injection 50mg/ml & 100mg/2ml

Pethidine Hydrochloride

Read all of this leaflet carefully before you are given this medicine.
- Keep this leaflet. You may need to read it again.
- If you have any further questions, please ask your doctor, nurse or midwife.
- If any of the side effects get serious, or if you notice any side effects not listed in this leaflet, please tell your doctor or nurse.

In this leaflet:

1. What Pethidine Injection is and what it is used for

Pethidine is a drug with powerful pain relieving properties.

Pethidine Injection is used for the relief of moderate to severe pain and is used for pain relief during labour. It may also be used to stop you from feeling pain before and during an operation and to provide continuous pain relief if needed

2. Before you are given Pethidine Injection

You should not be given Pethidine Injection if:
- you are allergic (hypersensitive) to Pethidine Hydrochloride or to any of the ingredients of this medicine (listed in section 6)
- you suffer from asthma, shallow breathing or other breathing difficulties
- you are suffering from severe headaches or have suffered a head injury
- you suffer from alcoholism
- you suffer from a convulsive disorder (fits) such as epilepsy
- you have any liver or kidney problems
- you are suffering from a condition known as delirium tremens, caused by withdrawal from alcohol
- your heartbeat is faster than usual
- you suffer from a tumour of the adrenal gland known as phaeochromocytoma
- you suffer from diabetes
- you are taking or have recently taken any drugs used to treat depression known as Monoamine Oxidase Inhibitors (MAOI's) (see 'Taking other medicines)

Take special care with Pethidine Injection
Tell your doctor if you:
- are in shock, the symptoms of which include sweating, a fast pulse and cold, clammy skin
- suffer from thyroid problems
- suffer from problems related to your adrenal gland (the organ responsible for stress levels), including adrenocortical insufficiency (a lack of the hormones produced by the adrenal gland)
- suffer from low blood pressure
- suffer from problems with your prostate
- suffer from problems with your gallbladder
- suffer from problems with your bowel

If you are elderly or ill, or your baby or child is being given Pethidine Injection, special care will be taken.

If any of the above apply to you or your child, please tell your doctor before being given Pethidine Injection.

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

Pethidine Injection **must not** be used with drugs used to treat severe depression, such as rasagiline or moclobemide, or if you are within 2 weeks of discontinuing them.
These drugs are known as Monoamine Oxidase Inhibitors (MAOI's),

Other medicines which may interact with Pethidine Injection include:
- selegiline, a medicine used to treat Parkinson's disease
- ritonavir, a medicine used to treat HIV
- cimetidine, a medicine used to treat stomach ulcers
- medicines used to reduce anxiety (anxiolytics)
- medicines used to help you to sleep (hypnotics)
- CNS depressants (drugs that act on the brain and make you feel drowsy or faint). These include sleeping pills, anti-histamines (medicines used to treat allergies) that make you drowsy, medicines used to treat certain mental disorders, other pain killers or a general anaesthetic.
- phenytoin, a medicine used to treat fits
- medicines used to treat serious mental disorders (phenothiazines)
- duloxetine, a medicine used to treat depression

If you are in any doubt please tell your doctor of any medication you are taking.

Pregnancy and breast-feeding:
If you are pregnant, think you may be pregnant or you are breast-feeding, you should consult your doctor before having Pethidine Injection.

Pethidine can pass into your baby either through your blood (during pregnancy and labour) or through your breast milk. This can cause breathing problems in newborn babies. Your doctor will be aware of this and will correct the problem and discuss feeding with you.

Driving and using machines:
This medicine can affect your ability to drive and operate machinery. Do not drive or operate machinery if you feel drowsy or cannot think clearly.

This medicine can affect your ability to drive and operate machinery as it may make you sleepy or dizzy.
- Do not drive while taking this medicine until you know how it affects you.
- It is an offence to drive if this medicine affects your ability to drive.
- However, you would not be committing an offence if:
  - The medicine has been prescribed to treat a medical or dental problem and
  - You have taken it according to the instructions given by the prescriber or in the information provided with the medicine and
  - It was not affecting your ability to drive safely

Talk to your doctor or pharmacist if you are not sure whether it is safe for you to drive while taking this medicine.

Having Pethidine Injection with food and drink
You are advised not to drink alcohol during your treatment with this medicine.

Continued overleaf

TECHNICAL PRESCRIBING INFORMATION

Product Name: Pethidine Injection BP 50mg/ml and 100mg/2ml

Composition/excipients:
Pethidine injection is a sterile aqueous solution of 5% w/v Pethidine Hydrochloride BP. It also contains Water for Injections and may contain Sodium Hydroxide as a pH adjuster.

Indications:
Relief of moderate to severe pain, as a premedication, obstetric analgesia and enhancement of analgesia.

Dose:

Adults.
For moderate or severe pain.
Normal single dose (usually not to be repeated more often than 4 hourly)

By intramuscular or subcutaneous injection	25 - 100 mg.
By slow intravenous injection	25 - 50 mg.

For obstetric analgesia.

By intramuscular or subcutaneous injection repeated 1 – 3 hours later. Maximum of 400mg in 24 hours.	50 - 100 mg.

As a premedication.

By intramuscular injection one hour prior to the operation.	50 - 100mg

For the enhancement of analgesia.

By slow intravenous injection.	10 -25mg as required.

Elderly or debilitated patients.
Initial doses should not exceed 25mg as this group of patients may be specially sensitive to the central depressant effect of the drug.

Children
For moderate or severe pain.

By intramuscular injection	0.5 - 2 mg per Kg of body weight.

As a premedication.

By intramuscular injection one hour prior to the operation	1 - 2 mg per Kg of body weight.

Contra-indications:

Respiratory depression, obstructive airways disease or acute asthma. It should not be administered to patients with severe renal impairment or severe hepatic impairment. Should be avoided in patients with acute alcoholism, delirium tremens, raised intracranial pressure or in those with convulsive states such as status epilepticus. It should not be administered to patients receiving monoamine oxidase inhibitors or moclobemide, or within two weeks of their withdrawal. Pethidine should not be administered to patients receiving ritonavir or selegiline. Not to be given to patients with a history of hypersensitivity or idiosyncratic response to the drug or its excipients. Use of pethidine should be avoided in patients with supraventricular tachycardia. Use of Pethidine in patients with phaeochromocytoma may result in hypertensive crisis. Use of pethidine should be avoided in patients with diabetic acidosis where there is a danger of coma.

Warnings :

Repeated use may result in dependence of the morphine type. The use of pethidine should be avoided in patients with head injuries, where administration may affect both the respiratory function and the pupillary responses required for neurological assessment. Pethidine should be avoided in patients with low respiratory reserve due to the respiratory effects of the drug. Pethidine should only be given with caution and in reduced doses to neonates, premature infants, patients who are elderly or debilitated or those with impaired hepatic or renal function. All of these patient groups may experience increased or prolonged effects of the product. Pethidine should be used with caution in patients with shock, hypothyroidism, adreno-cortical insufficiency and a history of convulsive disorders. Although less spasmogenic than morphine, pethidine may precipitate spasm of the ureter or Sphincter of Oddi. Subsequently it should be used with caution in patients with prostatic hypertrophy and biliary tract disorders including those with pain secondary to gallbladder pathology.

Pethidine should be used with caution in patients with existing hypotension as it may reduce the blood pressure further. In addition it should be avoided in patients with severe inflammatory bowel disease due to its effects on the gastrointestinal tract where it may precipitate toxic megacolon.

Interactions :

Pethidine should not be administered to patients receiving monoamine oxidase inhibitors or moclobemide or within two weeks of their withdrawal. Patients receiving selegiline should not be given pethidine as hyperpyrexia and CNS toxicity may result. Plasma concentrations of pethidine may be decreased by concomitant administration of ritonavir, however levels of norpethidine (a toxic metabolite) may rise. Concomitant administration of ritonavir and pethidine should be avoided. (see Contra-indications). Rasagiline should not be given with Pethidine as there is a risk of CNS toxicity, its use should be avoided for two weeks after taking rasagiline. Cimetidine potentiates the effect of pethidine. Duloxetine when given with pethidine can increase the serotonergic effects. The effects of pethidine may also be potentiated by concurrent administration with other CNS depressants including anaesthetics, anxiolytics, hypnotics, and alcohol. Administration of Phenytoin may cause an increase in hepatic metabolism of pethidine and subsequently increased levels of norpethidine (a toxic metabolite). Concomitant administration with phenothiazines may induce severe hypotension.

Pregnancy :

There is inadequate evidence of safety in human pregnancy, but the drug has been widely used for many years without apparent ill consequence. Animal studies have not shown any hazard. As with all drugs during pregnancy care should be taken in assessing the risk to benefit ratio. Pethidine crosses the placental barrier and is excreted in breast milk. This should be taken into account when considering its use in patients during pregnancy or breast feeding. Administration during labour may cause respiratory depression in the new-born infant.

Side Effects:

General hypersensitivity reactions occur rarely. Mild euphoria may occur and CNS excitation has been reported in some patients. Following administration of pethidine dizziness, fainting, drowsiness, weakness, hallucinations, dysphoria, mood changes, vertigo, sweating and headache have been reported. Dependence may occur as a result of continued use. Pethidine may obtund or abolish the corneal reflex and cause pupillary constriction. In addition miosis has been reported. Other undesirable effects include hypotension, hypertension, dry mouth, facial flushing, bradycardia, tachycardia, palpitations, vasodilation and postural hypotension. Administration of pethidine may cause respiratory depression. Nausea, vomiting and constipation have all been reported following administration of pethidine. Rashes, urticaria and pruritus may occur due to histamine release. Ureteric or biliary spasm may be experienced, as may difficulty with micturition. There have been reports of decreased libido or potency. Local reactions at the injection site may be experienced. These include induration and local irritation. The development of hypothermia has been reported.

Overdose:

Symptoms:
Incoordination, tremors and convulsions followed by respiratory depression and coma.

Treatment:
If respiration is dangerously depressed the use of naloxone is recommended. Artificial respiration may be necessary. If signs of CNS toxicity are exhibited the use of pethidine should be discontinued. Respiratory support and, if necessary, anticonvulsive therapy should be provided.

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Incompatibilities:

Pethidine is incompatible with barbiturate salts and with other drugs including aminophylline, heparin sodium, methicillin sodium, morphine sulphate, nitrofurantoin sodium, phenytoin sodium, sulphadiazine sodium, sodium iodide, sulphafurazole diethanolamine. Incompatibility has also been observed between pethidine hydrochloride and acyclovir sodium, imipenem, frusemide and idarubicin.

Colour changes or precipitation have been observed on mixing pethidine with the following drugs, minocycline hydrochloride, tetracycline hydrochloride, cefoperazone sodium, mezlocillin sodium, nafcillin sodium and liposomal doxorubicin hydrochloride.

Pharmacodynamics:

Pethidine is a narcotic analgesic with similar actions to morphine.

Pharmacokinetics:

Pethidine is extensively distributed throughout the body with a distribution volume of 200-300L. It is 40 - 65% plasma bound and can cross the placenta. 70% of a dose is excreted in the urine in 24 hours. 5 – 30% is unchanged depending on the pH of the urine.

Shelf Life: 36 months.

Storage: Store below 25°C.
Store in airtight container. Protect from light.

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MARTINDALE PHARMA
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3. How Pethidine Injection will be given

Your doctor will give Pethidine Injection to you as an injection into a vein (intravenously), under the skin (subcutaneously) or into a muscle (intramuscularly). Your doctor will determine how much you need.

Adults
For the relief of moderate to severe pain:
The usual initial dose is 25-100mg either into a muscle or under the skin, or 25-50mg if given into a vein. The dose is given at a minimum of four hourly intervals if needed.

For pain relief during labour:
The usual dose is 50-100mg either into a muscle or under the skin every 1-3 hours during labour up to a maximum of 400mg in 24 hours.

For pain relief before and during an operation:
The usual dose is 50-100mg into a muscle one hour before the operation.

For continuous pain relief:
The usual dose is 10-25mg by slow injection into the vein as needed.

The elderly and ill
It is recommended that a reduced dose be used. The usual initial dose is up to a maximum of 25mg.

Children
For the relief of moderate to severe pain:
The usual dose is 0.5-2mg per kilogram of body weight by intramuscular injection.

For pain relief before and during an operation:
The usual dose is 1-2mg per kilogram of body weight into the muscle one hour before the operation.

If you are given too much of Pethidine Injection:
This medicine will be given to you in hospital so it is unlikely you will receive too much. Your doctor has information on how to recognise and treat an overdose.

If you feel unwell after being given this medicine, or are at all concerned you have been given too much, tell your doctor or nurse.

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

4. Possible Side Effects

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

Repeated use of pethidine can result in tolerance and addiction

If any of the following symptoms occur contact your doctor or nearest accident and emergency department **immediately**. These are symptoms of a serious allergic reaction.
- sudden wheeziness and tightness of chest
- swelling of eyelids, face or lips
- skin lumps or hives
- skin rash (red spots), itchiness, fever
- collapse

Other side effects that may occur include:
- restlessness
- drowsiness
- constipation
- dry mouth
- feeling sick (nausea)
- being sick (vomiting)
- facial flushing
- sweating
- a fast or slow heartbeat
- palpitations (an irregular heart rhythm or missed beats)
- low blood pressure, the symptoms of which include feeling dizzy or light-headed, feeling weak and fainting.
- high blood pressure
- pin-point pupils
- a feeling of dizziness or spinning
- fainting
- feeling weak
- hallucinations (seeing or hearing things that aren't real)
- mood changes
- headache
- feeling faint on standing up from a seated position
- slowed breathing
- a red, itchy rash
- reduced sex drive
- difficulty achieving or maintaining an erection
- pain, redness or itching at the injection site
- hypothermia, the symptoms of which include shivering, drowsiness and feeling weak
- feeling of intense happiness (euphoria)
- difficulty in passing urine
- spasms in the lower abdomen

If any of these side effects get serious, or you notice any other side effects not listed in this leaflet, please tell your doctor, nurse or midwife.

5. How to Store Pethidine Injection

Keep all medicines out of the reach and sight of children.

You should not be given Pethidine Injection after the expiry date on the ampoule and carton label. The expiry date refers to the last day of that month. The doctor or nurse will check that the product has not passed this date.

Do not store above 25°C.

6. Further Information

What Pethidine Injection contains
Active Ingredient: Pethidine Hydrochloride 5%w/v
Other Ingredients: sodium hydroxide and water for injections.

What Pethidine Injection looks like and contents of the pack:
Pethidine Injection is a sterile solution, supplied in clear glass ampoules. Each ampoule contains 1ml or 2ml of the solution.

Marketing Authorisation Holder:
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Manufacturers:
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Product Licence Number:
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