

**PART II**  
**SUMMARY OF PRODUCT CHARACTERISTICS**

**1) Name of the medicinal Product**

Pethidine Injection BP 50mg/ml, 1ml & 2ml

**2) Qualitative and quantitative composition**

Each 1ml of solution contains 50mg of Pethidine Hydrochloride  
Each 2ml of solution contains 100mg of Pethidine Hydrochloride.  
For a full list of excipients see section 6.1

**3) Pharmaceutical form**

Solution for injection (Injection)  
A clear colourless, sterile solution for injection.

**4) Clinical Particulars**

**4.1 Therapeutic Indications**

As an analgesic in the relief of moderate to severe pain.  
As an adjunct in anaesthesia.  
For preoperative medication  
During labour

**4.2 Posology and method of administration**

Pethidine Injection BP is for administration by subcutaneous, intramuscular or slow intravenous injection.

Adults:

The usual dose is 25 to 100mg intramuscularly or subcutaneously or 25 to 50mg by slow intravenous injection. Dosage may be repeated if required every 4 hours.

The Elderly:

In view of their greater sensitivity, the initial dose should not exceed 25mg.

Paediatric patients:

The usual dose is 0.5 to 2mg/kg body weight. Dosage may be repeated if required every 4 hours.

The use of a small graduated syringe is recommended for the accurate administration of dosages given to children. In the absence of graduated syringes, the solution should be diluted with Water for Injections before measuring the dose.

**4.3 Contraindications**

Use in patients with hypersensitivity or idiosyncratic response to the active ingredient or to any of the excipients.  
Use in patients with coma

Use in patients who are receiving, or have within two weeks received, monoamine oxidase inhibitors.

Use in patients with Respiratory depression.

#### **4.4 Special warnings and precautions for use**

This product should only be used with extreme caution and in reduced dosage in neonates, premature infants. The elderly, the debilitated, or patients with hypothyroidism, adrenocortical insufficiency, shock, liver dysfunction, prostatic hypertrophy, renal insufficiency or biliary tract disorder.

Repeated use will induce physical and psychological dependence, with a withdrawal syndrome on cessation of therapy.

Excessive dosage (relative or absolute) may induce convulsions.

Pethidine should only be administered with great caution to patients with supraventricular tachycardia, respiratory dysfunction, convulsive disorders, increased intracranial pressure, acute alcoholism.

Repeated use will result in the development of tolerance and cross tolerance with other narcotic analgesics, requiring increases in dosage to achieve the required effect.

If the intravenous route is being used, Pethidine should be given slowly in order to reduce the risk of adverse reactions.

Use of Pethidine in prolonged increasing dosage or concomitantly with anticholinergics may result in neurotoxicity in patients with renal failure, cancer or sickle cell anaemia and that severe hypotension may occur when Pethidine is administered to patients whose ability to maintain blood pressure has been compromised by a depleted blood volume by the administration of drugs such as phenothiazines.

#### **4.5 Interaction with other medicinal products and other forms of interaction.**

The central depressant effects of pethidine may be potentiated by the cocurrent use of other central nervous system depressants including sedatives, phenothiazine neuroleptics, anxiolytics, antidepressants, other analgesics, alcohol and general anesthetics; respiratory depression, hypotension or profound sedation or coma may result.

Cimetidine inhibits metabolism of pethidine and therefore increases plasma concentration.

Very severe reactions including coma, respiratory depression, cyanosis and hypotension have occurred in patients administered monoamine oxidase inhibitors (MAOIs). Pethidine should not be administered to patients taking MAOIs or to those who have taken MAOIs within 14 days (see Special warnings and precautions for use).

#### **4.6 Pregnancy and lactation**

Pethidine should not be administered in pregnancy prior to the period of labour, unless the potential benefits outweigh the possible hazards, because the safe use of Pethidine in

pregnancy prior to labour has not been established relative to possible adverse effects on foetal development.

All the narcotic analgesics are able to traverse the placenta and are excreted in milk. This should be borne in mind when considering their use in patients during pregnancy or lactation. Administration during labour may cause respiratory depression in the newborn.

#### **4.7 Effects on ability to drive and use machines**

The product will cause drowsiness. Patients should be advised not to drive or to operate machinery until the effects on physical and mental ability have gone.

#### **4.8 Undesirable Effects**

**Cardiac disorders:** tachycardia, bradycardia, palpitation, syncope

**Eye disorders:** visual disturbances

**Gastrointestinal disorders:**

Very common: nausea, vomiting

Dry mouth, constipation and biliary tract spasm.

**General disorders and administration site conditions:** weakness, pain at the injection site, wheal and flare over the vein with intravenous injection, local tissue irritation.

**Nervous system disorders:**

Very common: lightheadedness, dizziness, sedation

Headache, tremor, convulsions, uncoordinated muscle movements.

**Psychiatric disorder:** euphoria, dysphoria, agitation, hallucinations

**Renal and urinary disorders:** Urinary retention

**Respiratory, thoracic & mediastinal disorders:**

Very common: Respiratory depression

**Skin and subcutaneous tissue disorders:**

Very common: sweating

Pruritus, urticaria, other skin rashes

**Vascular disorders:**

Very common: Hypotension

Flushing of the face

#### **4.9 Overdose**

Possible manifestations of overdosage include in coordination, tremors, convulsions, hypotension and respiratory depression.

Intensive supportive therapy may be required to correct respiratory failure and shock. A patent airway must be maintained and assisted respiration may be required. The specific narcotic antagonist naloxone hydrochloride is used to counteract respiratory depression and

coma. A dose of 0.4 to 2mg is given intravenously and may be repeated at intervals of 2 to 3 minutes if necessary, up to 10mg.

An anticonvulsant drug may be required to control seizures.

## **5 PHARMACOLOGICAL PROPERTIES**

### **5.1 Pharmacodynamic properties**

**ATC CODE:** N02AB02

**Pharmacotherapeutic Group:** Opioid derivatives

Pethidine is a narcotic analgesic. Like other opioids, Pethidine binds to opioid receptors and exerts its principal pharmacological actions on the central nervous system where its analgesic and sedative effects are of particular therapeutic value.

### **5.2 Pharmacokinetic properties**

A narcotic analgesic well absorbed and widely distributed with peak effects at 15-120 minutes, depending on the route of administration. The drug is metabolized in the liver and metabolites excreted mainly via urine, with a T<sub>1/2</sub> of 3-6 hours. Norpethidine, one of the metabolites, has a greater excitatory but fewer depressant effects on patients than Pethidine. Its accumulation may result in toxicity. The T<sub>1/2</sub> of norpethidine is reported to be up to 20 hours.

### **5.3 Preclinical safety data**

No further relevant information other than that which is included in other sections of the Summary of Product Characteristics.

## **6 PHARMACEUTICAL PARTICULARS**

### **6.1 List of excipients**

Sodium hydroxide

Or

Dilute Hydrochloric acid (for pH-adjustment)

Water for injections

### **6.2 Incompatibilities**

There was loss of clarity when intravenous solutions of Pethidine hydrochloride were mixed with those of aminophylline, amylobarbitone sodium, heparin sodium, methicillin sodium, morphine sulphate, nitrofurantoin sodium, pentobarbitone sodium, phenobarbitone sodium, phenytoin sodium, sodium bicarbonate, sodium iodide, sulphadiazine sodium, sulphafurazole, diethanolamine or thiopentone sodium.

### **6.3 Shelf Life**

Unopened: 4 years

Once opened: Use immediately.

### **6.4 Special precautions for storage**

Do not store above 25° C

Keep ampoule in the outer carton in order to protect from light.

### **6.5 Nature and contents of the container**

1ml and 2ml, clear glass one-point-cut (OPC) ampoules, glass type I Ph.Eur.borosilicate glass, packed in cardboard cartons to contain 10 x 1ml or 10 x 2ml ampoules.

**6.6 Special precautions for disposal of a used medicinal product or waste materials derived from such medicinal product and other handling of the product.**

For single use only.

If only part of the contents of the ampoule is used, the remaining solution should be discarded.

**7 MARKETING AUTHORISATION HOLDER**

Antigen Pharmaceuticals Ltd,  
Roscrea  
County Tipperary

**8 MARKETING AUTHORISATION NUMBER**

PA 73/14/1

**9 DATE OF FIRST AUTHORISATION/RENEWAL OF AUTHORISATION**

Date of first authorization: 1<sup>st</sup> April 1978

Date of Last renewal: 1<sup>st</sup> April 2003

**10 DATE OF REVISION OF THE TEXT**

September 2009