

# Summary of Product Characteristics

## 1 NAME OF THE MEDICINAL PRODUCT

Dozol Oral Solution Paracetamol 120 mg/5 ml Diphenhydramine Hydrochloride 12.5 mg/5 ml

## 2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each 5 ml contains: Paracetamol 120 mg and Diphenhydramine Hydrochloride 12.5 mg.

Excipients: Also contains:

Propylene glycol 500mg/5ml

Sorbitol liquid (non-crystallising) (E420) 1.5g/5ml

Maltitol liquid (E965) 250mg/5ml

Ponceau 4R (E124) 16.7micrograms/5ml

E218 1.825mg/5ml

E214 0.4mg/5ml

and E216 0.275mg/5ml

For a full list of excipients, see section 6.1.

## 3 PHARMACEUTICAL FORM

Oral solution

Clear amber coloured oral solution with caramel odour.

## 4 CLINICAL PARTICULARS

### 4.1 Therapeutic indications

Dozol Oral Solution is indicated in children aged over 2 years in the relief of teething pains, irritability associated with injections or feverishness, aches or pains, sleeplessness associated with the above conditions. Not recommended for routine use.

### 4.2 Posology and method of administration

Age	How Much	How Often (in 24 hours)
2 years – 4 years	5 mL	3 times
4 years – 6 years	7.5 mL	3 times
6 years – 8 years	10 mL	3 times
8 years – 10 years	15 mL	3 times
10 years – 12 years	20 mL	3 times

Maximum of 3 doses per 24 hours.

Do not exceed the stated dose.

Carefully administer the correct volume to the child using the measuring device provided in order to minimise the risk of overdose.

Parents should consult a pharmacist or other healthcare professional before use in children under 6 years of age.

For short-term use only. Not recommended for routine use (See sections 4.4/4.1).

Dozol is contraindicated in children under 2 years (see section 4.3).

Dozol should be administered with caution to patients with known liver or renal impairment. (see section 4.4).

### 4.3 Contraindications

1. Large doses of antihistamines may precipitate fits in epileptics.
2. Patients with rare hereditary problems of fructose intolerance should not take this medicine.
3. This medicine should not be used in children under two years of age.
4. This medicine should not be used in children with hypersensitivity to the active substance(s) or to any of the excipients.

5. This medicine should not be used in children who are taking monoamine oxidase inhibitors (MAOIs) or within 14 days of stopping treatment (See section 4.5).
6. This medicine should not be used in porphyric patients.

#### 4.4 Special warnings and precautions for use

1. Do not exceed the stated dose.
2. For short-term use only (See section 4.2).
3. Not recommended for routine use (see Section 4.1/4.2)
4. Parents or carers should seek medical attention if the child's condition fails to improve or deteriorates at any stage during treatment
5. May cause drowsiness. Children receiving this medication should be kept under supervision.
6. Contains Paracetamol. Do not take any other Paracetamol containing products.
7. Immediate medical advice should be sought in the event of overdosage because of the risk of irreversible liver damage.
8. Not more than 3 doses should be given in any 24 hours. (See section 4.2)
9. Parents or carers should ensure that no other antihistamine/diphenhydramine containing products are used concomitantly.
10. Parents should consult a pharmacist or other healthcare professional before use in children under 6 years of age.
11. Keep out of sight and reach of children.
12. Dozol should be administered with caution to patients with known liver or renal impairment (see section 4.2).
13. **Caution is advised if paracetamol is administered concomitantly with flucloxacillin due to increased risk of high anion gap metabolic acidosis (HAGMA), particularly in patients with severe renal impairment, sepsis, malnutrition and other sources of glutathione deficiency (e.g. chronic alcoholism), as well as those using maximum daily doses of paracetamol. Close monitoring, including measurement of urinary 5-oxoproline, is recommended.**

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

The anticoagulant effect of warfarin and other coumarins may be enhanced by prolonged regular use of paracetamol with increased risk of bleeding; occasional doses have no significant effect.

The rate of absorption of paracetamol may be increased by metoclopramide or domperidone and absorption reduced by cholestyramine.

Chronic alcohol intake can increase the hepatotoxicity of paracetamol overdose. Acute alcohol intake may diminish an individual's ability to metabolise large doses of paracetamol, the plasma half-life of which can be prolonged.

The use of drugs that induce hepatic microsomal enzymes, such as anticonvulsants and oral contraceptives, may increase the extent of metabolism of paracetamol, resulting in reduced plasma concentrations of the drug and a faster elimination rate.

Diphenhydramine hydrochloride may enhance the sedative effects of CNS depressants including barbiturates, hypnotics, opioid analgesics, anxiolytic sedatives, antipsychotics and alcohol. It may also have an additive antimuscarinic action with other drugs such as atropine and some antidepressants. Diphenhydramine hydrochloride should not be used in patients taking monoamine oxidase inhibitors (MAOIs) or within 14 days of stopping treatment as there is a risk of serotonin syndrome.

**Caution should be taken when paracetamol is used concomitantly with flucloxacillin as concurrent intake has been associated with high anion gap metabolic acidosis, especially in patients with risks factors (see section 4.4)**

#### 4.6 Fertility, pregnancy and lactation

##### Pregnancy

This product should not be used during pregnancy unless the potential benefit of treatment to the mother outweighs any possible risk to the developing foetus.

Based on animal studies diphenhydramine is not expected to increase the risk of congenital anomalies (see section 5.3). However, there are no adequate and well-controlled studies in pregnant women. Use of sedating antihistamines during the third trimester may result in adverse reactions in premature infants and neonates. Diphenhydramine should not be taken during the third trimester.

A large amount of data on pregnant women indicate neither malformative, nor feto/neonatal toxicity. Epidemiological studies on neurodevelopment in children exposed to paracetamol in utero show inconclusive results. If clinically needed, paracetamol can be used during pregnancy however it should be used at the lowest effective dose for the shortest possible time and at the lowest possible frequency.

#### Lactation

This product should not be used during breastfeeding unless the potential benefit of treatment to the mother outweighs any possible risk to the nursing infant.

Paracetamol is excreted in breast milk but not in a clinically significant amount. To date, no undesirable effects on breast-fed infants have been reported.

Diphenhydramine has been detected in breast milk, but levels have not been reported and the effects are unknown. However, because of the potential risk of antihistamines to nursing infants, diphenhydramine is not recommended for use in nursing mothers. New-born or premature infants show increased sensitivity to antihistamines.

#### Fertility

There is no information on the effect of Dozol Oral Solution on fertility.

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

May cause drowsiness. If affected do not drive or operate machinery.

### 4.8 Undesirable effects

Adverse effects of paracetamol are rare but hypersensitivity including skin rash may occur. Very rare cases of serious skin reactions have been reported. There have been a few reports of blood dyscrasias including thrombocytopenia and agranulocytosis, but these were not necessarily causally related to paracetamol.

Chronic hepatic necrosis has been reported in a patient who took daily therapeutic doses of paracetamol for about a year and liver damage has been reported after daily ingestion of excessive amounts for shorter periods.

A review of a group of patients with chronic active hepatitis failed to reveal differences in the abnormalities of liver function in those who were long-term users of paracetamol nor was the control of the disease improved after paracetamol withdrawal.

Nephrotoxic effects following therapeutic doses of paracetamol are uncommon. Papillary necrosis has been reported after prolonged administration.

#### Diphenhydramine Side Effects

##### Common side-effects:

**CNS effects:** Drowsiness (usually diminishes within a few days), paradoxical stimulation, headache, psychomotor impairment.

**Antimuscarinic effects:** Urinary retention, dry mouth, blurred vision, gastrointestinal disturbances, thickened respiratory tract secretions.

**Rare side-effects:** Hypotension, extrapyramidal effects, dizziness, confusion, depression, sleep disturbances, tremor, convulsions, palpitation, arrhythmia, hypersensitivity reactions, blood disorders and liver dysfunction.

#### Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via HPRA Pharmacovigilance, Earlsfort Terrace, IRL - Dublin 2; Tel: +353 1 6764971; Fax: +353 1 6762517. Website: [www.hpra.ie](http://www.hpra.ie); E-mail: [medsafety@hpra.ie](mailto:medsafety@hpra.ie).

### 4.9 Overdose

Liver damage is possible in adults who have taken 10g or more of paracetamol. Ingestion of 5g or more of paracetamol may lead to liver damage if the patient has risk factors, including the following ones:

#### Risk factors

- a) Long term treatment with carbamazepine, phenobarbitone, phenytoin, primidone, rifampicin, St John's Wort or other drugs that induce liver enzymes, or
- b) regular consumption of ethanol in excess of recommended amounts, or
- c) likely glutathione depletion, e.g. eating disorders, cystic fibrosis, HIV infection, starvation, cachexia.

#### Symptoms

Symptoms of paracetamol overdose in the first 24 hours are pallor, nausea, vomiting, anorexia and abdominal pain. Liver damage may become apparent 12 to 48 hours after ingestion. Abnormalities of glucose metabolism and metabolic acidosis may occur. In severe poisoning, hepatic failure may progress to encephalopathy, haemorrhage, hypoglycaemia, cerebral oedema and death. Acute renal failure with acute tubular necrosis, strongly suggested by loin pain, haematuria, and proteinuria, may develop even in the absence of severe liver damage. Cardiac arrhythmias and pancreatitis have been reported.

#### Treatment

Immediate treatment is essential in the management of paracetamol overdose. Despite a lack of significant early symptoms, patients should be referred to hospital urgently for immediate medical attention.

Symptoms may be limited to nausea or vomiting and may not reflect the severity of overdose or the risk of organ damage.

Management should be in accordance with established treatment guidelines.

Treatment with activated charcoal should be considered if the overdose has been taken within 1 hour. Plasma paracetamol concentration should be measured at 4 hours or later after ingestion (earlier concentrations are unreliable). Treatment with N-acetylcysteine may be used up to 24 hours after ingestion of paracetamol, however, the maximum protective effect is obtained up to 8 hours post-ingestion. The effectiveness of the antidote declines sharply after this time. If required the patient should be given intravenous N-acetylcysteine, in line with the established dosage schedule. If vomiting is not a problem, oral methionine may be a suitable alternative for remote areas, outside hospital. Management of patients who present with serious hepatic dysfunction beyond 24h from ingestion should be discussed with a liver unit.

Mild cases of overdose with antihistamines are mainly characterised by prominent anticholinergic effects including dry mouth, headache, nausea, tachycardia and urinary retention. Larger overdoses will have additional antihistamine effects which may depress or stimulate the CNS. In small children, the stimulatory effects predominate and clinical features include hallucinations, ataxia and convulsions. The child may be hot, flushed and have dilated pupils. Cardiorespiratory depression and coma can subsequently develop followed by rapid death. Overdosing diphenhydramine in adults usually results in drowsiness followed by convulsions and coma. Fever and flushing are uncommon. Overdosed patients are best treated by gastric lavage and supportive measures. Administration of activated charcoal may be useful. Convulsions can be controlled with diazepam. Peripheral anticholinergic effects can be controlled with subcutaneous neostigmine.

## 5 PHARMACOLOGICAL PROPERTIES

### 5.1 Pharmacodynamic properties

Paracetamol is an antipyretic and analgesic. Diphenhydramine HCl is an antihistamine with anticholinergic, anti-emetic, anti-allergic and sedative effects.

### 5.2 Pharmacokinetic properties

Paracetamol and Diphenhydramine HCl are both readily absorbed from the gastro-intestinal tract. Both are widely distributed throughout the body. Both are metabolised in the liver and excreted in the urine. As Dozol is a solution, absorption of the actives is rapid following oral ingestion.

### 5.3 Preclinical safety data

Conventional studies using the currently accepted standards for the evaluation of toxicity to reproduction and development are not available.

## 6 PHARMACEUTICAL PARTICULARS

## 6.1 List of excipients

Macrogol 4000  
Glycerol  
Propylene glycol  
Sorbitol Liquid (non-crystallising) (E420)  
Maltitol Liquid  
Neohesperidin Dihydrochalcone  
Saccharin Sodium

Niasept containing: Ethyl Parahydroxybenzoate (E214)  
Methyl Parahydroxybenzoate (E218)  
Propyl Parahydroxybenzoate (E216)

Butterscotch yellow (E160)  
Caramel flavour CD65424  
Ponceau 4R (E124)  
Purified water

## 6.2 Incompatibilities

None known.

## 6.3 Shelf life

3 years.

## 6.4 Special precautions for storage

Do not store above 25°C. Keep container in the outer carton. Do not refrigerate or freeze.

## 6.5 Nature and contents of container

Amber hydrolytic resistance Type III Soda-lime-silica glass bottles with child resistant tamper evident closure. The closure is manufactured from polypropylene with a polyethylene liner and tamper evident band. A 5ml dosing syringe with markings at both 2.5 ml and 5ml is provided with the bottle.

Pack sizes: 100 ml and 30 ml.

Not all pack sizes may be marketed.

## 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

No special requirements.

## 7 MARKETING AUTHORISATION HOLDER

Phoenix Healthcare Ltd  
Suite 12 Bunkilla Plaza  
Bracetown Business Park  
Clonee  
Co Meath  
Ireland

## 8 MARKETING AUTHORISATION NUMBER

PA1721/005/001

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

Date of first authorisation: 01 April 1978

Date of last renewal: 01 April 2008

**10 DATE OF REVISION OF THE TEXT**

August 2023