

NEW ZEALAND DATA SHEET

1. PRODUCT NAME

Nausafix

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each tablet contains 5 mg prochlorperazine maleate.

Excipient with known effect: lactose.

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

White to off-white, circular, uncoated tablets with '5' debossing on one side.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Nausafix is used in vertigo due to Meniere's syndrome, labyrinthitis and other causes, and for nausea and vomiting from whatever cause. It may also be used for migraine, schizophrenia (particularly in the chronic stage), acute mania and as an adjunct to the short term management of anxiety.

4.2 Dose and method of administration

Adults

Nausea and Vomiting

Prevention of nausea and vomiting: 5 or 10 mg two or three times daily.

Treatment of nausea and vomiting: 20 mg immediately followed, if necessary, by 10 mg two hours later.

Vertigo and Meniere's disease

5 mg three times a day, increasing if necessary to a total of 30 mg daily. After several weeks dosage may be reduced gradually to 5-10 mg daily.

Adjunct in the short term management of anxiety

10-20 mg daily in divided doses initially but this may be increased if necessary to a maximum of 40 mg daily in divided doses.

Schizophrenia and other psychotic disorders

Usual effective daily oral dosage is in the order of 75-100 mg daily. Patients vary widely in response. The following schedule is suggested:

Initially 12.5 mg twice daily for 7 days, the daily amount being subsequently increased by 12.5 mg at four to seven day intervals until a satisfactory response is obtained.

After some weeks at the effective dosage, an attempt should be made to reduce this dosage. Total daily amounts as small as 50 mg or even 25 mg have sometimes been found to be effective.

Paediatric population

Prevention and treatment of nausea and vomiting

If it is considered unavoidable to use Nausafix for a child, the dosage is 0.25 mg/kg bodyweight, two or three times a day.

Nausafix has been associated with dystonic reactions particularly after a cumulative dosage of 0.5 mg/kg. It should therefore be used cautiously in children.

Nausafix is not recommended in children under 2 years of age or weighing less than 10 kg as acute extrapyramidal reactions are more likely to occur.

Intramuscular or rectal prochlorperazine should not be given to children. When treating children it is recommended that the 5 mg tablets are used.

Special Populations

Elderly

Prochlorperazine should be used cautiously in this group in psychotic disorders. Elderly patients susceptible to centrally-acting medicines hence lower initial dosage is recommended. There is an increased risk of drug-induced Parkinsonism in the elderly, particularly after prolonged use. Correct initial diagnosis is important. Care should also be taken not to confuse adverse effects of prochlorperazine, e.g. orthostatic hypotension with effects due to the primary disorder.

Impaired liver function

Since prochlorperazine is extensively metabolised by the liver, dosage reduction may be necessary.

4.3 Contraindications

Circulatory collapse, central nervous system depression (coma or drug intoxication), previous history of a hypersensitivity reaction (e.g. jaundice or blood dyscrasia) to phenothiazines especially to prochlorperazine or to any of the other ingredients listed in section 6.1, bone marrow depression.

4.4 Special warnings and precautions for use

Hypersensitivity reactions including anaphylactic reaction, urticaria and angioedema have been reported with prochlorperazine use. In case of allergic reaction, treatment with prochlorperazine must be discontinued and appropriate symptomatic treatment initiated (see Section 4.8 Undesirable Effects).

Prochlorperazine should be avoided in patients with liver or renal dysfunction, Parkinson's disease, hypothyroidism, cardiac failure, phaeochromocytoma, myasthenia gravis and prostate hypertrophy. It should be avoided in patients with a history of narrow angle glaucoma or agranulocytosis.

Acute withdrawal symptoms, including nausea, vomiting, headache, anxiety, agitation, dyskinesia, dystonia, disturbed temperature regulation, and insomnia, have very rarely been reported following the abrupt cessation of high doses of neuroleptics. Relapse may also occur, and the emergence of extrapyramidal reactions has been reported. Therefore, gradual withdrawal is advisable. Symptoms of withdrawal can occur following treatment at any dose. Withdrawal of treatment should occur under close medical supervision.

As agranulocytosis has been reported, regular monitoring of the complete blood count is recommended. The occurrence of unexplained infections or fever may be evidence of blood dyscrasia and requires immediate haematological investigation.

All patients should be advised that, if they experience fever, sore throat or any other infection, they should inform their physician immediately and undergo a complete blood count. Treatment should be discontinued if any marked changes (hyperleucocytosis, granulocytopenia) are observed in the blood count.

Prochlorperazine can cause photosensitisation, therefore patients should be advised to avoid exposure to direct sunlight during treatment.

In schizophrenia, the response to prochlorperazine treatment may be delayed. If treatment is withdrawn, the reoccurrence of symptoms may not become apparent for some time. Avoid concomitant treatment with other neuroleptics.

Phenothiazines may be additive with, or may potentiate the action of, other CNS depressants such as opiates or other analgesics, barbiturates or other sedatives, general anesthetics, or alcohol.

To prevent skin sensitisation in those frequently handling preparations of phenothiazines, the greatest care must be taken to avoid contact of the drug with the skin.

Hypotension

The autonomic side effects of the piperazine derivatives are less troublesome than those of other phenothiazines, however care should be taken if prochlorperazine is used in the elderly or in patients undergoing surgery with spinal anaesthesia.

Epileptics

Piperazine derivatives are also less epileptogenic than other phenothiazines, but care should still be exercised in epileptic patients.

Anticholinergic effects

Prochlorperazine can cause problems due to anticholinergic effects, especially in the elderly (urinary difficulties, constipation and precipitation of acute narrow angle glaucoma), but to a lesser extent than with other phenothiazines.

Hypocalcaemia

It appears from a study of 5 hypocalcaemic patients with hypoparathyroidism that such patients are prone to acute dystonic reactions with prochlorperazine.

Sedative effect

Prochlorperazine may impair mental and physical activity especially during the first few days of therapy. Patients should be warned about activities requiring alertness.

Antiemetic effects

The antiemetic effects of prochlorperazine may mask signs of overdose of toxic drugs or obscure the diagnosis of conditions such as intestinal obstruction, brain tumour.

Reye's Syndrome

The extrapyramidal symptoms which can occur secondary to prochlorperazine may be confused with the central nervous system signs of an undiagnosed primary disease responsible for the vomiting, e.g. Reye's Syndrome or other encephalopathy. The use of prochlorperazine and other potential hepatotoxins should be avoided in children and adolescents whose signs and symptoms suggest Reye's Syndrome.

Hypothermia

Severe hypothermia may occur during swimming in cold water or in patients receiving antipyretic therapy.

Liver disease

Caution should be used in patients with existing liver disease due to the extensive hepatic metabolism of prochlorperazine. A past history of jaundice resulting from phenothiazine therapy indicates a hypersensitivity reaction and there is a likelihood of cross sensitivity to other phenothiazines.

Tardive dyskinesia

Tardive dyskinesia may develop in patients on antipsychotic drugs. The disorder consists of repetitive involuntary movements of the tongue, face, mouth or jaw (e.g. protrusion of the tongue, puffing the cheeks, puckering of the mouth, chewing movements). The trunk and limbs are less frequently

involved. It has been reported that fine vermicular movements of the tongue may be an early sign of the syndrome.

Both the risk of developing the syndrome and the likelihood that it will become irreversible are believed to increase as the duration of treatment and the total cumulative dose of the drug increases. Less commonly, the syndrome can develop after relatively brief treatment periods at low doses. The risk seems to be greater in elderly patients, especially females.

The syndrome may become clinically recognisable either during treatment, upon dosage reduction, or upon withdrawal of treatment. The dosage of antipsychotic drug should be reduced periodically (if clinically possible) and the patient observed for signs of the disorder, since the syndrome may be masked by a higher dose. In patients requiring long-term treatment, the smallest dose and the shortest duration of treatment producing a satisfactory clinical response should be sought.

There is no known effective treatment for tardive dyskinesia. Antiparkinsonian agents usually do not alleviate symptoms. It is suggested that antipsychotic agents be discontinued if symptoms of tardive dyskinesia appear.

Neuroleptic Malignant Syndrome

A potentially fatal syndrome called neuroleptic malignant syndrome has been reported in association with antipsychotic drugs. The syndrome is characterised by muscular rigidity, fever, hyperthermia, altered consciousness and autonomic instability (e.g. tachycardia, labile blood pressure, profuse sweating, dyspnoea).

It is imperative that prochlorperazine treatment be discontinued in the event of unexplained fever, as this may be a sign of neuroleptic malignant syndrome (pallor, hyperthermia, autonomic dysfunction, altered consciousness, muscle rigidity).

Signs of autonomic dysfunction, such as sweating and blood pressure instability, may precede the onset of hyperthermia and serve as early warning signs. Although neuroleptic malignant syndrome may be idiosyncratic in origin, dehydration and organic brain disease are predisposing factors (see Section 4.8 Undesirable Effects).

The management of neuroleptic malignant syndrome should include immediate discontinuation of anti-psychotic drugs, intensive monitoring and treatment of symptoms, and treatment of any associated medical problems.

QT Interval

Very rare cases of QT interval prolongation have been reported with prochlorperazine. Neuroleptic phenothiazines may potentiate QT interval prolongation which increases the risk of onset of serious ventricular arrhythmias of the torsade de pointes type, which is potentially fatal (sudden death).

QT prolongation is exacerbated, in particular, in the presence of bradycardia, hypokalemia, and congenital or acquired (i.e., drug induced) QT prolongation. If the clinical situation permits, medical and laboratory evaluations should be performed to rule out possible risk factors before initiating treatment with a neuroleptic agent and as deemed necessary during treatment (see section 4.8 Undesirable effects).

Cerebrovascular Events

An increased risk of cerebrovascular events has been reported in elderly patients with dementia treated with atypical antipsychotic drugs. An increase in the risk of cerebrovascular events with other antipsychotic drugs or other populations of patients cannot be excluded.

Prochlorperazine should therefore be used with caution in patients with stroke risk factors.

Thromboembolism

Cases of venous thromboembolism (VTE), sometimes fatal, have been reported with antipsychotic drugs. Since patients treated with antipsychotics often present with acquired risk factors for VTE, all possible risk factors for VTE should be identified before and during treatment with prochlorperazine and preventative measures undertaken. Therefore, prochlorperazine should be used with caution in patients with risk factors for thromboembolism (see section 4.8 Undesirable effects).

Use in the elderly

It should be used with caution in the elderly, particularly during very hot or very cold weather (risk of hyper-,hypothermia).

Prochlorperazine should be used cautiously in the elderly owing to their susceptibility to drugs acting on the central nervous system and a lower initial dosage is recommended. There is an increased risk of drug-induced Parkinsonism in the elderly particularly after prolonged use. Care should also be taken not to confuse the adverse effects of prochlorperazine, e.g. orthostatic hypotension, with the effects due to the underlying disorder.

Elderly patients with dementia-related psychosis treated with antipsychotic drugs are at an increased risk of death. Although the causes of death in clinical trials with atypical antipsychotics were varied, most of the deaths appeared to be either cardiovascular (e.g., heart failure, sudden death) or infectious (e.g. pneumonia) in nature. Observational studies suggest that, similar to atypical antipsychotic drugs, treatment with conventional antipsychotic drugs may increase mortality. The extent to which the findings of increased mortality in observational studies may be attributed to the antipsychotic drug as opposed to some characteristic(s) of the patients is not clear.

Prolonged administration of any phenothiazine may result tardive dyskinesias, particularly in the elderly and children.

Careful monitoring of treatment with prochlorperazine is required when administered in elderly patients exhibiting greater susceptibility to orthostatic hypotension, sedation, and extrapyramidal effects; chronic constipation (risk of ileus paralytic); possible prostatic hypertrophy.

Hyperglycaemia

Hyperglycaemia or intolerance to glucose has been reported in patients treated with prochlorperazine. Patients with an established diagnosis of diabetes mellitus or with risk factors for the development of diabetes who are started on prochlorperazine, should get appropriate glycaemic monitoring during treatment (see section 4.8 Undesirable effects).

Alcohol use

Patients are strongly advised not to consume alcohol and alcohol-containing medicines while being treated with prochlorperazine.

Use in children

Prochlorperazine is not recommended for use in children under 10 kg in weight or under 2 years of age as acute extrapyramidal reactions are more likely to occur.

Prochlorperazine should not be given to children by the rectal or intramuscular route.

4.5 Interaction with other medicines and other forms of interaction

Contraindicated combinations:

Dopaminergics, except in patients with Parkinson's disease.

Mutual antagonism between dopaminergics and neuroleptics.

Where treatment for neuroleptic-induced extrapyramidal symptoms is required, anticholinergic antiparkinsonian agents should be used in preference to levodopa, since neuroleptics antagonise the antiparkinsonian action of dopaminergics.

Adrenaline must not be used in patients overdosed with prochlorperazine (see Section 4.9 Overdose).

Combinations not recommended or requiring precaution

Dopaminergics in patients with Parkinson's disease.

Dopaminergics may cause or exacerbate psychotic disorders. If treatment with neuroleptics is required in patients with Parkinson's disease treated with a dopaminergic, the latter should be tapered off gradually (sudden discontinuation of dopaminergic agents exposes the patient to a risk of "neuroleptic malignant syndrome"). For parkinsonian patients who require treatment with both a neuroleptic and a dopaminergic agent, use the minimum effective doses of both medications.

Caution is required with the use of the following medicines due to the risk of QT prolongation (see section 4.4 Special warnings and precautions for use):

- Class Ia antiarrhythmic agents such as quinidine and disopyramide.
- Class III antiarrhythmic agents such as amiodarone and sotalol.
- Other medications such as bepridil, cisapride, sultopride, thioridazine, methadone, intravenous erythromycin, intravenous vincamine, halofantrine, pentamidine, sparfloxacin.
- Medicines which induce bradycardia, such as bradycardia-inducing calcium channel blockers (diltiazem, verapamil), beta-blockers, clonidine, guanfacine, digitalis.
- Medicines which can cause hypokalaemia, such as diuretics, stimulant laxatives, intravenous amphotericin B (amphotericin), glucocorticoids, tetracosactide (tetracosactrin).
- Other antipsychotics .

Prochlorperazine may enhance the CNS depressant effects of alcohol and other depressant drugs, and potentiate the anticholinergic effects of atropinic agents and tricyclic antidepressants. Respiratory depression may occur. Impaired vigilance may make it dangerous to drive or use machines. Avoid consumption of alcoholic beverages and medications containing alcohol.

Anticholinergic agents may reduce the antipsychotic effect of neuroleptics. The mild anticholinergic effect of prochlorperazine may be enhanced by other anticholinergic drugs, possibly leading to dry mouth, constipation, heat stroke, urinary retention and other adverse effects.

Some drugs interfere with absorption of prochlorperazine:

- anti-Parkinson drugs
- lithium
- Gastro-intestinal agents that are not absorbed (magnesium, aluminium and calcium salts, oxides and hydroxides): Reduced gastro-intestinal absorption of phenothiazine neuroleptics may occur. Such gastro-intestinal agents should not be taken at the same time

as prochlorperazine.

High doses of prochlorperazine reduce the response to hypoglycaemic agents, the dosage of which might have to be raised.

The hypotensive effect of most antihypertensive drugs especially alpha adrenoceptor blocking agents may be exaggerated by prochlorperazine.

The action of some drugs may be opposed by prochlorperazine; these include amphetamine, levodopa, clonidine, guanethidine, adrenaline.

Increases or decreases in the plasma concentrations of a number of drugs, e.g. propranolol, phenobarbital have been observed.

There is an increased risk of arrhythmias when prochlorperazine is used with concomitant QT prolonging drugs (including certain antiarrhythmics, antidepressants and other antipsychotics) and drugs causing electrolyte imbalance.

There is an increased risk of agranulocytosis when prochlorperazine is used concurrently with drugs with myelosuppressive potential, such as carbamazepine or certain antibiotics and cytotoxics.

In patients treated concurrently with prochlorperazine and lithium, there have been rare reports of neurotoxicity.

Cytochrome P450 2D6 Metabolism:

Some phenothiazines are moderate inhibitors of CYP2D6. There is a possible pharmacokinetic interaction between inhibitors of CYP2D6, such as phenothiazines, and CYP2D6 substrates. Co-administration of prochlorperazine with amitriptyline, a CYP2D6 substrate, may lead to an increase in plasma levels of amitriptyline. Monitor patients for dose-dependent adverse reactions associated with amitriptyline.

Prochlorperazine should be avoided in patients taking monoamine oxidase inhibitors.

Because of convulsive risk, the combined use of medicinal products which lower the seizure threshold should be carefully assessed.

Simultaneous administration of desferrioxamine and prochlorperazine has been observed to induce a transient metabolic encephalopathy characterised by loss of consciousness for 48-72 hours.

Procarbazine has been reported to potentiate the extrapyramidal side effects encountered with the use of prochlorperazine. Phenothiazines have been reported both to impair and increase metabolism of phenytoin, with uncertain clinical significance. Patients on levodopa should not be given phenothiazines because the two drugs are physiologically antagonistic.

Thiazide diuretics may accentuate the orthostatic hypotension that may occur with phenothiazines.

Antihypertensive effects of guanethidine and related compounds may be counteracted when phenothiazines are used concomitantly.

Phenothiazines can diminish the effect of oral anticoagulants. Concomitant administration of propranolol with phenothiazines results in increased plasma levels of both drugs. Phenothiazines may lower the convulsive threshold; dosage adjustments of anticonvulsants may be necessary.

4.6 Fertility, pregnancy and lactation

Use in pregnancy (Category C)

The use of Nausafix is not recommended during pregnancy and in women of childbearing potential not using contraception, unless the potential benefits outweigh the potential risks.

When given in high doses during late pregnancy, phenothiazines have caused jaundice, hyperreflexia, hyporeflexia or prolonged extrapyramidal disturbances in the child. There is evidence of harmful effects in animals.

The following effects have been reported (in postmarketing surveillance) in neonates exposed to phenothiazines during the third trimester of pregnancy:

- various degrees of respiratory disorders ranging from tachypnoea to respiratory distress, bradycardia and hypotonia, most often when other drugs such as psychotropic or antimuscarinic drugs were coadministered.
- signs related to the atropinic properties of phenothiazines such as meconium ileus, delayed meconium passage, initial feeding difficulties, abdominal bloating, tachycardia;
- neurological disorders such as extrapyramidal symptoms including tremor and hypertonia, somnolence, agitation.

Appropriate monitoring and treatment of neonate born to mothers receiving prochlorperazine is recommended.

Like other drugs it should be avoided in pregnancy unless the physician considers it essential. Neuroleptics may occasionally prolong labour and at such a time should be withheld until the cervix is dilated 3-4 cm. Possible adverse effects on the foetus include lethargy or paradoxical hyperexcitability, tremor and a low Apgar score.

Use in lactation

Trace amounts of another phenothiazine, chlorpromazine, have been detected in breast milk, but there is no information available for prochlorperazine. Consequently, it is not known whether it is excreted in neither breast milk nor whether it has a harmful effect on the newborn. Therefore, prochlorperazine is not recommended for nursing mothers unless the expected benefits outweigh any potential risk.

Fertility

No data available.

4.7 Effects on ability to drive and use machines

Patients should be warned about drowsiness during early days of treatment and advised not to drive or operate machinery if affected.

4.8 Undesirable effects

The following reactions have been reported for prochlorperazine or phenothiazines in general.

Vascular disorders

More common: Orthostatic hypotension. Elderly or volume depleted patients are particularly susceptible; it is more likely to occur after intramuscular injection.

Cases of venous thromboembolism, including cases of pulmonary embolism, sometimes fatal, and cases of deep vein thrombosis have been reported with antipsychotic drugs (see Section 4.4 Special warnings and precautions for use).

Blood and lymphatic system disorders

Not known: Eosinophilia.

Less common: Agranulocytosis, atypical lymphocytes, thrombocytopenia, leucopenia, aplastic anaemia.

Biochemical abnormalities

Less common: Elevated serum levels of bilirubin and hepatic enzymes may occur if the patient develops cholestatic jaundice.

Cardiac disorders

Less common: Peripheral oedema, cardiac arrhythmias, ECG changes, QT interval prolongation, ST depression, U-Wave and T-Wave changes. Cardiac arrhythmias, including ventricular arrhythmias and atrial arrhythmias, atrioventricular block, ventricular tachycardia, which may result in ventricular fibrillation or cardiac arrest have been reported during phenothiazine therapy, possibly related to dosage.

Pre-existing cardiac disease, old age, hypokalaemia and concurrent tricyclic antidepressants may predispose patients to cardiac events.

There have been reports of sudden death, with possible causes of cardiac origin (see Section 4.4 Special warnings and precautions for use), as well as cases of unexplained sudden death, in patients receiving neuroleptic phenothiazines.

Not known: Torsade de pointes.

Skin and subcutaneous tissue disorders

Less common: Dermatitis allergic, maculopapular eruptions, erythema multiforme, urticaria, photosensitivity reaction, pigmentation disorder.

Endocrine disorders

Less common: Endocrine disturbances including elevated prolactin levels, hyperglycaemia, intolerance to glucose, hypoglycaemia, menstrual irregularities, galactorrhoea, gynaecomastia, amenorrhoea, erectile dysfunction.

Not known: Temperature regulation disorder

Gastrointestinal

More common: Constipation, dry mouth.

Less common: Paralytic ileus.

Renal and urinary disorders

Less common: Urinary retention.

Hepatobiliary disorders

Less common: Jaundice cholestatic, liver damage.

Nervous system disorders

More common: Drowsiness, akathisia, parkinsonism, (with dyskinesia, tremor and rigidity).

Less common: Dystonia including oculogyric crisis usually transitory are commoner in children

and young adults, and usually occur after dosage increases.

Less common: Tardive dyskinesia: If this occurs it is usually, but not necessarily, after prolonged or high dosage. It can even occur after treatment has been stopped. Dosage should therefore be kept low whenever possible.

Less common: Torticollis and opisthotonus and trismus, seizures, EEG changes, headache, insomnia, catatonia, hyperpyrexia, agitation, dizziness.

Less common: Seizures have been reported.

Not known: Anticholinergic effects such as ileus paralytic, risk of urinary retention, dry mouth, constipation, accommodation disorder.

Not Known: Extrapyramidal syndrome:

- Akinesia with or without hypertonia, partially relieved by anticholinergic antiparkinsonian agents.

- Hyperkinetic-hypertonic movements, motor excitation.

- Akathisia.

Not Known: Insomnia.

Not Known: Dizziness.

Not Known: Sedation or somnolence.

Not Known: Neuroleptic malignant syndrome (hyperthermia, rigidity, autonomic dysfunction and altered consciousness) may occur with any neuroleptic (see Section 4.4 Special warnings and precautions for use).

Eye Disorders

More common: Blurred vision.

Less common: Pigmentary retinopathy.

Less common: Corneal Deposits (brownish deposits in the anterior segment of the eye, due to accumulation of the drug and generally without effect on vision).

Not known: Accommodation disorder

Psychiatric disorders

Less common: Activation of psychotic symptoms.

Not known: Agitation, confusional state, delirium, anxiety.

Respiratory, thoracic and mediastinal disorders

Less common: Respiratory depression, nasal congestion.

Metabolism and Nutrition Disorders

Less common: Hyponatraemia and inappropriate antidiuretic hormone secretion have also been reported.

In post-marketing surveillance cases of hyperglycaemia or intolerance to glucose have been reported with antipsychotic phenothiazines (see Section 4.4 Special warnings and precautions for use).

Immune system disorders

Less common: Hypersensitivity reactions such as angioedema and urticaria have been reported.

Less common: Anaphylactic reaction.

Reproductive system and breast disorders

Less common: priapism, ejaculation disorder

Pregnancy, puerperium and perinatal conditions

Drug withdrawal syndrome neonatal (see Section 4.6 Fertility, pregnancy and lactation, Use in pregnancy).

Investigations

Not known: Weight increased, Liver function test abnormal.

Serious or Life Threatening Reactions

Prochlorperazine can cause very serious acute dystonic reactions in children leading to cyanosis from laryngospasm, apnoea requiring artificial ventilation, life-threatening tetanus like syndromes, coma and even death. These reactions can occur with a single therapeutic dose. For treatment, see section 4.9 Overdose. Also, long-term phenothiazine therapy has been associated with ECG changes and life threatening cardiac arrhythmias.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicine is important. It allows continued monitoring of the benefit/risk balance of the medicine. Healthcare professionals are asked to report any suspected adverse reactions (<https://nzphvc.otago.ac.nz/reporting/>).

4.9 Overdose

Symptoms

Overdosage with phenothiazines may cause CNS depression progressing from drowsiness to coma with areflexia. Patients with early or mild intoxication may experience restlessness, confusion and excitement. Other symptoms include hypotension, tachycardia, hypothermia, pupillary constriction, restlessness, tremor, muscle twitching, spasm or rigidity, convulsions, muscular hypotonia, difficulty in swallowing or breathing, cyanosis, and respiratory and/or vasomotor collapse, possibly with sudden apnoea. There is no information available regarding lethal dose in man.

Treatment

Acute dystonic reactions

Intramuscular benztropine (or another antiparkinsonian agent) should be given immediately.

Overdosage

Emesis should not be induced, not only because the antiemetic action of prochlorperazine prevents the effect of the emetic agent, but also because the sedative and extra-pyramidal side effects increase the risk of pulmonary aspiration should vomiting occur. Management is generally supportive with particular attention to the possibility of obstructed ventilation, severe hypotension, hypothermia, cardiac arrhythmias, convulsions and prolonged deep sedation. Acute dystonic reactions usually occur early (if at all); treatment is with anticholinergic agents, as above.

Adrenaline must not be used as it may cause a paradoxical further lowering of blood pressure

For advice on the management of overdose please contact the National Poisons Centre on 0800 POISON (0800 764766).

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Phenothiazines with piperazine structure, ATC code: N05AB04

Prochlorperazine is a phenothiazine with a piperazine moiety in the side chain. It possesses strong antiemetic and antipsychotic activity with less sedative action than chlorpromazine.

As with other phenothiazines, prochlorperazine has actions on several neurotransmitter systems:

1. Antidopamine action, which probably contributes to both the therapeutic effect and unwanted effects including extrapyramidal disorders and endocrine disturbances.
2. α -Adrenoreceptor antagonism, which contributes to cardiovascular side effects such as orthostatic hypotension and reflex tachycardia.
3. Potentiation of noradrenaline by blocking its reuptake into nerve terminals.
4. Weak anticholinergic action.
5. Weak antihistamine action.
6. Weak serotonin antagonism.

Prochlorperazine also has an effect on temperature control and blocks conditioned avoidance responses.

5.2 Pharmacokinetic properties

There are few published data on prochlorperazine pharmacokinetics in the human. Most studies have been done in rats and dose levels do not correspond to those used clinically and metabolic pathways may differ. Similar overall pharmacokinetic patterns however would occur in the human.

Absorption

Prochlorperazine is well absorbed from the gastrointestinal tract in rats but absorption is slowed in repeatedly treated animals.

Distribution

The drug is widely distributed to tissues including the brain, fat, kidney, heart and skin and is stored in reticuloendothelial tissues.

Biotransformation

Phenothiazines are metabolised primarily in the liver and are subject to enterohepatic circulation.

Elimination

Excretion is mainly in the faeces. Only a very small amount (approx. 0.1%) of prochlorperazine and its metabolites are excreted in the first 24 hours in the urine and the drug may continue to be excreted in the urine for up to 3 weeks after cessation of long term therapy. The elimination half-life is approximately 24 hours, presumably due to its enterohepatic circulation.

5.3 Preclinical safety data

None.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Lactose monohydrate, maize starch, colloidal anhydrous silica and magnesium stearate.

6.2 Incompatibilities

Not applicable.

6.3 Shelf life

36 months

6.4 Special precautions for storage

Store below 25°C. Protect from light.

6.5 Nature and contents of container

PVC/PVdC/Aluminium foil blister strips. Pack size of 10 or 250 tablets.

Not all pack sizes may be marketed.

6.6 Special precautions for disposal

No special requirements for disposal.

7. MEDICINE SCHEDULE

Pharmacist Only Medicine (only for the treatment of nausea associated with migraine):

Blister packs of 10 tablets

Prescription Medicine: Blister packs of 250 tablets

8. SPONSOR

Teva Pharma (New Zealand) Limited

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Telephone: 0800 800 097

9. DATE OF FIRST APPROVAL

15 May 2014

10. DATE OF REVISION OF THE TEXT

07 September 2023

SUMMARY TABLE OF CHANGES

Section changed	Summary of new information
3.	Amend terminology for tablet appearance.
4.2, 4.3, 4.4, 4.5. 4.6 & 4.8	Updated safety information.