

Rescon[®]-MX Tablets

Rx Only

500389 Rev 06/2009

Description

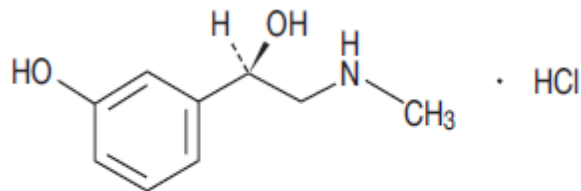
Each long-acting tablet contains:

Phenylephrine Hydrochloride40 mg

Dexchlorpheniramine Maleate6 mg

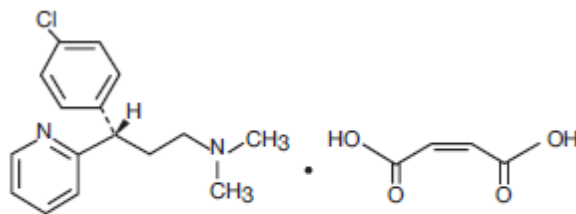
Inactive ingredients: calcium phosphate, hydrogenated vegetable oil, magnesium stearate, methylcellulose, povidone, stearic acid and green dye.

Phenylephrine HCl is a sympathomimetic amine with the chemical structure: Benzenemethanol, 3-hydroxy- α [(methylamino)methyl]hydrochloride.



$C_9H_{13}NO_2 \cdot HCl$ M.W. 203.67

Dexchlorpheniramine Maleate is an antihistamine with the chemical structure: (+)-2-[p-Chloro- α [2-(dimethylamino) ethyl]benzyl]pyridine maleate (1:1)



$C_{16}H_{19}ClN_2 \cdot C_4H_4O_4$
M.W. 390.86

CLINICAL PHARMACOLOGY

Phenylephrine Hydrochloride is a sympathomimetic amine, which acts directly on α -adrenergic receptors in the mucosa of the respiratory tract to produce vasoconstriction that increases peripheral resistance, resulting in an increase in both systolic and diastolic blood pressure. Accompanying the pressor response is a marked reflex bradycardia due to

increased vagal activity. It produces vasoconstriction that lasts longer than that produced by ephedrine and epinephrine, and in therapeutic doses, produces little or no central nervous system (CNS) stimulation. Phenylephrine has reduced bioavailability from the gastrointestinal tract because of first pass metabolism by monoamine oxidase in the stomach and liver.

Dexchlorpheniramine Maleate is the dextro-isomer of the racemic compound chlorpheniramine maleate. In vitro and in vivo assays of the antihistamine potencies of the optically active isomers of chlorpheniramine demonstrate that the predominant activity is in the dextro-isomer. The dextro-isomer is approximately two times more active than the racemic compound. Dexchlorpheniramine maleate competitively antagonizes most of the smooth muscle stimulating actions of histamine on the H₁ receptors of the GI tract, uterus, large blood vessels, and bronchial muscle. It also antagonizes the action of histamine that results in increased capillary permeability and the formation of edema.

Dexchlorpheniramine maleate is an alkylamine-type antihistamine. This group of antihistamines is among the most active histamine antagonists and are generally effective in relatively low doses. They thereby prevent, but do not reverse, responses mediated by histamine alone. The anticholinergic actions of most antihistamines provide a drying effect on the nasal mucosa. These drugs are not so prone to produce drowsiness and are among the most suitable agents for daytime use, but a significant proportion of patients do experience this effect.

INDICATIONS

This product provides relief of the symptoms resulting from irritation of sinus, nasal, and upper respiratory tract tissue. Phenylephrine exerts a vasoconstrictive and decongestive action while dexchlorpheniramine maleate decreases the symptoms of watering eyes, post-nasal drip, and sneezing.

CONTRAINDICATIONS

This product is contraindicated in women who are pregnant or nursing. This product is contraindicated in children under twelve years of age because this age group is sensitive to the effects of sympathomimetic amines. It is also contraindicated in newborn or premature infants because this age group has an increased susceptibility to the anticholinergic side effects of dexchlorpheniramine maleate. Geriatric patients may be more sensitive to the effects of this medication.

Risk-benefit should be considered when the following conditions exist:

Sensitivity to phenylephrine or dexchlorpheniramine; Acute asthma; Bladder neck obstruction; Brain damage in children; Cardiac disease, especially cardiac arrhythmias, congestive heart failure, coronary artery disease, and mitralstenosis; Cardiovascular disease; Diabetes mellitus; Down's Syndrome; Esophagitis, reflux; Glaucoma; Acute hemorrhage with unstable cardiovascular status; Hepatic function impairment; Hernia; Hypertension; Hyperthyroidism; Intestinal atony in the elderly or debilitated patient; Chronic lung disease; Myasthenia gravis; Autonomic neuropathy; Paralytic ileus; Prostatic hypertrophy; Psychiatric disorders; Pyloric obstruction; Renal function impairment; Spastic

paralysis, in children; Tachycardia; Toxemia of pregnancy; Ulcerative colitis; Urinary retention, or predisposition to; Uropathy; Xerostomia.

WARNINGS

This product may cause drowsiness or blurred vision. Patients taking this product should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or to perform hazardous tasks while taking this drug.

Sympathomimetic amines should be used with caution in patients with hypertension, ischemic heart disease, diabetes mellitus, increased intraocular pressure, hyperthyroidism, or prostatic hypertrophy.

Sympathomimetic amines in overdose may produce CNS stimulation with convulsions or cardiovascular collapse with accompanying hypotension.

Do not exceed recommended dosage.

Antihistamines should be used with considerable caution in pyloroduodenal obstruction; symptomatic prostatic hypertrophy; bladder neck obstruction. Antihistamines may cause excitability, especially in children. At dosages higher than the recommended dose, nervousness, dizziness or sleeplessness may occur. **Do not exceed recommended dosage.**

PRECAUTIONS

General: Use phenylephrine with caution in patients with hypoxia, acidosis, or a history of arteriosclerosis, bradycardia, partial heart block, hypertension, myocardial disease, thrombosis, or ventricular tachycardia. Antihistamines have an atropine-like action and should be used with caution in patients with a history of bronchial asthma, emphysema, increased intraocular pressure, hyperthyroidism, cardiovascular disease and hypertension.

Information for Patients:

Patient consultation should include the following information regarding proper use of this medication:

- Do not take more medication than the amount recommended.
 - May be taken with or without food; can be taken with food, a glass of water or milk to lessen stomach irritation if necessary.
 - Do not drive or operate machinery if drowsiness or dizziness occurs.
 - Do not ingest alcoholic beverages, monoamine oxidase (MAO) inhibitors, or CNS depression producing medications (hypnotics, sedatives, tranquilizers) while taking this medication.
 - This medication possibly increases sensitivity of eyes to light.
 - If a dose is missed, the medication should be taken as soon as possible unless it is almost time for the next dose: not doubling doses.
 - This medication should be stored in a tight, light-resistant container at temperatures between 20°- 25°C (68°-77°F), see USP Controlled Room Temperature. Avoid exposure to heat.
 - Keep all medications out of the reach of children. In case of accidental overdose, seek professional assistance or contact a poison control center immediately.
- Caution patients about the signs of potential side effects, especially:

- Anticholinergic effects – clumsiness or unsteadiness; severe drowsiness; severe dryness of mouth, nose, or throat; flushing or redness of face; shortness of breath or troubled breathing.
- Blood dyscrasias - sore throat and fever; unusual bleeding or bruising; unusual tiredness or weakness.
- Fast or irregular heartbeat.
- Psychotic episodes.
- Tightness in chest.

Laboratory Tests: The following may be especially important in patient monitoring (other tests may be warranted in some patients, depending on conditions): Blood pressure determination – recommended at frequent intervals during therapy; Electrocardiogram (ECG) - monitoring may be required; Intraocular pressure determination - recommended at periodic intervals, as these medications may increase the intraocular pressure.

Drug Interactions: Do not take this product if you are presently taking, or have taken within the preceding two weeks, a prescription drug for high blood pressure without first consulting your physician. Combinations containing any of the following medications, depending on the amount present, may also interact with this product:

- α -adrenergic blocking agents or other medications with α -adrenergic blocking action prior administration of α -adrenergics may block the pressor response to phenylephrine, possibly resulting in severe hypotension; medications with α -adrenergic blocking action may decrease the pressor effect and shorten the duration of action of phenylephrine.
- Anesthetics, hydrocarbon inhalation- Concurrent use of chloroform, cyclopropane, halothane, or trichloroethylene with phenylephrine may increase the risk of severe ventricular arrhythmias because these anesthetics greatly sensitize the myocardium to the effects of sympathomimetic amines; phenylephrine should be used with caution and in substantially reduced dosage in patients receiving these anesthetics. Enflurane, isoflurane, or methoxyflurane may also cause some sensitization of the myocardium to the effects of sympathomimetic amines.
- Anesthetics, parenteral-local -Phenylephrine should be used cautiously and in carefully circumscribed quantities, if at all, with local anesthetics for anesthetizing areas with end arteries (such as the fingers, toes, or penis) or otherwise compromised blood supply; ischemia leading to gangrene may result.
- Anticholinergics - Concurrent use with anticholinergics may intensify anticholinergic effects; patients should be advised to report occurrence of gastrointestinal problems promptly since paralytic ileus may occur with concurrent therapy.
- Antidepressants, tricyclic or maprotiline - Concurrent use may potentiate the cardiovascular effects of phenylephrine, possibly resulting in arrhythmias, tachycardia, or severe hypertension or hyperpyrexia.
- Antihypertensives, or diuretics used as Antihypertensive effects may be reduced when these medications are used concurrently with phenylephrine; the patient should be carefully monitored to confirm that the desired effect is being obtained.
- β -adrenergic blocking agents – Therapeutic effects may be inhibited when these medications are used concurrently with phenylephrine, especially larger doses; also, β – adrenergic blockade may result in unopposed α -adrenergic activity with a risk of hypertension and excessive bradycardia with possible heart block.

- CNS Depressants – Concurrent use of antihistamines with alcohol, tricyclic antidepressants, barbiturates and other CNS depressants may have an additive effect.
- Cocaine, mucosal-local - Concurrent use with phenylephrine may increase the cardiovascular effects of either or both medications and the risk of adverse side effects.
- Digitalis glycosides – Concurrent use with phenylephrine may increase the risk of cardiac arrhythmias; caution and ECG monitoring are necessary if concurrent use is required.
- Ergoloid mesylates or Ergotamine - Concurrent ergoloid mesylates or ergotamine with phenylephrine may produce peripheral vascular ischemia and gangrene and is not recommended. Concurrent use of ergotamine with phenylephrine may potentiate the pressor effect of phenylephrine, resulting in possible severe hypertension and rupture of cerebral blood vessels.
- Doxapram - Concurrent use may increase the pressor effects of either doxapram or phenylephrine.
- Ketoconazole – Anticholinergics may increase gastrointestinal pH, possibly resulting in a marked reduction in ketoconazole absorption during concurrent use with anticholinergics; patients should be advised to take these medications at least 2 hours after ketoconazole.
- Methyldopa - In addition to possibly decreasing the hypotensive effects of these medications, concurrent use may enhance the pressor response to phenylephrine; caution is required with very small initial doses of methyl-dopa being administered.
- MAO inhibitors - Concurrent use may prolong and intensify cardiac stimulant and vasopressor effects of phenylephrine and dexchlorpheniramine, resulting in headache, cardiac arrhythmias, vomiting or sudden and severe hypertensive and/or hyperpyretic crises. These medications should not be administered during or within 14 days following the administration of MAO inhibitor therapy.
- Potassium chloride – Concurrent use with anticholinergics may increase the severity of potassium chloride-induced gastrointestinal lesions.
- Rauwolfia alkaloids – Concurrent use may prolong the direct-acting sympathomimetic amines by preventing the uptake into storage granules.

Laboratory Test Interactions:

Antihistamines may interfere with diagnostic test results for skin tests using allergen extracts. Anticholinergics may interfere with diagnostic test results for gastric acid secretion by antagonizing the effect of pentagastrin and histamine, and for radio nucleotide gastric emptying studies by delaying gastric emptying.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No data are available on the long-term potential of the components of this product for carcinogenesis, mutagenesis or impairment of fertility in animals or humans.

Pregnancy:

Category C: Reproduction studies have been performed with chlorpheniramine maleate. Studies in rabbits and rats at doses up to 50 times and 85 times the human dose revealed no evidence of harm to the fetus. There are, however, no adequate and well controlled studies in pregnant women. Therefore, it is not known whether these drugs can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Animal reproduction studies

have not been conducted with phenylephrine.

This product should be given to a pregnant woman only if clearly needed.

Labor and Delivery: Use of phenylephrine during labor may cause fetal anoxia and bradycardia by increasing contractility of the uterus and decreasing uterine blood flow.

Nursing mothers: Small amounts of sympathomimetic amines and antihistamines are excreted in breast milk; use is not recommended because of the risk of adverse effects, such as unusual excitement or irritability, in infants. Anticholinergics and antihistamines may inhibit lactation.

Pediatric Use: Use of antihistamines is not recommended in newborn or premature infants because this age group has an increased susceptibility to anticholinergic side effects, such as CNS excitation, and an increased tendency toward convulsion. In infants and children, overdosage may cause hallucinations, convulsions, and death. A paradoxical reaction characterized by hyper-excitability may occur in older children taking antihistamines. Use is not recommended for children under twelve years of age. Appropriate studies with phenylephrine have not been performed in the pediatric population; however, no pediatric-specific problems have been documented to date.

Geriatric Use: Confusion, hallucinations, seizures and CNS depression may be more likely to occur in geriatric patients taking sympathomimetic amines. Geriatric patients also may be more sensitive to the effects, especially the vasopressor effects, of sympathomimetic amines. Confusion, dizziness, sedation, hypotension, hyperexcitability, and anticholinergic side effects, such as dryness of mouth and urinary retention (especially in males), may be more likely to occur in geriatric patients taking antihistamines. Geriatric patients may respond to usual doses of anticholinergics with excitement, agitation, drowsiness, or confusion. Geriatric patients are especially susceptible to the anticholinergic side effects, such as constipation, dryness of mouth, and urinary retention (especially in males). If these side effects occur and continue or are severe, medication should probably be discontinued. Caution is also recommended when anticholinergics are given to geriatric patients, because of the danger of precipitating undiagnosed glaucoma. Memory may become severely impaired in geriatric patients, especially those who already have memory problems, with the continued use of anticholinergics, since these drugs block the action of acetylcholine, which is responsible for many functions of the brain, including memory function.

ADVERSE REACTIONS

The following adverse reactions have been observed with the use of phenylephrine and dexchlorpheniramine: Arrhythmias, blood dyscrasias, CNS depression, CNS stimulation, dizziness, drowsiness, dryness of mouth, hallucinations, hypotension, hypertension, increased sensitivity of skin to sun, increased sweating, loss of appetite, paradoxical reaction, restlessness, skin rash, stomach upset or pain, thickening of mucus, tingling in hands or feet, trembling, troubled breathing, unusual tiredness or weakness, vomiting. Note: Agitation; confusion; difficult or painful urination; drowsiness; dizziness; and dryness of mouth, nose or throat are more likely to occur in the elderly. Nightmares, unusual excitement, nervousness, restlessness, or irritability are more likely to occur in children and the elderly.

DRUG ABUSE AND DEPENDENCE

Central nervous system stimulants such as phenylephrine have been abused. At high doses, subjects commonly experience an elevation of mood, a sense of increased energy and alertness, and decreased appetite. Some individuals become anxious, irritable and loquacious. In addition to the marked euphoria, the user experiences a sense of markedly enhanced physical strength and mental capacity. With continued use, tolerance develops, the user increases the dose, and toxic signs and symptoms appear. Depression may follow rapid withdrawal. Stimulants, such as phenylephrine, are banned and tested for by the U S Olympic Committee (USOC) and the National Collegiate Athletic Association (NCAA).

OVERDOSAGE

This product is comprised of pharmacologically different components (sympathomimetic amine, and antihistamine). Therefore, it is difficult to predict the exact manifestation of symptoms in a given individual. Reaction to an overdose of this product may vary from CNS depression to stimulation. A description of symptoms which are likely to appear after ingestion of an excess of the individual components follows:

- Overdosage with sympathomimetic amines can cause cardiac arrhythmias, cerebral hemorrhage and pulmonary edema. It can also cause palpitations, tremor, dizziness, vomiting, fear, labored breathing, headache, dryness of mouth, pallor, weakness, panic, anxiety, confusion, and hallucination.
- Manifestation of antihistamine overdose may vary from CNS depression to stimulation. Other signs and symptoms may be dizziness, tinnitus, ataxia, blurred vision, and hypotension. Stimulation is particularly likely in children as are atropine-like signs and symptoms (dry mouth, fixed, dilated pupils, flushing, hyperthermia, and gastrointestinal symptoms). In infants and children particularly, antihistamines, in over-dosage may produce convulsion and/or death. Treatment of acute overdose would probably be based upon treating the patient for phenylephrine toxicity which may manifest itself as excessive CNS stimulation resulting in excitement, tremor, restlessness, and insomnia. Other effects may include hyperpyrexia, hypertension, mydriasis, hyperglycemia and urinary retention. Severe overdose may cause tachypnea or hyperpnea, convulsions or delirium, but in some individuals there may be CNS depression with somnolence, stupor, or respiratory depression. Arrhythmias may lead to hypotension and circulatory collapse. Severe hypokalemia can occur, probably due to a compartmental shift rather than a depletion of potassium. No organ damage or significant metabolic derangement is associated with overdose.

General Treatment: Treatment is symptomatic and supportive with possible utilization of the following:

- Induction of emesis (syrup of Ipecac recommended); however, precaution against aspiration is necessary, especially in infants and children.
- Gastric lavage (isotonic or 0.45% sodium chloride solution) if patient is unable to vomit within three hours of ingestion.
- Saline cathartics (milk of magnesia) may be used.
- Vasopressors to treat hypotension; however, epinephrine should not be used since it may further lower blood pressure.
- For excessive hypertensive effect an α -adrenergic blocker, such as phentolamine, may be administered.
- Hyperpyrexia, especially in children, may require treatment by means of external cooling.

- Excessive CNS stimulation may be counteracted with parenteral diazepam.
- Oxygen and intravenous fluids.
- Precaution against the use of stimulants (analeptic agents) is recommended because they may cause seizures.
- Excitement to a degree which demands attention may be managed with sodium thiopental 2% solution given slowly intravenously or chloral hydrate (100 - 200 mL of a 2% solution) by rectal infusion. In severe cases of overdosage it is essential to monitor both the heart (by electrocardiograph) and plasma electrolytes, and to give intravenous potassium as indicated. In the event of progression of the curare-like effect to paralysis of the respiratory muscles or apnea, artificial respiration should be instituted and maintained until effective respiratory action returns.

DOSAGE AND ADMINISTRATION

Adults and adolescents 12 years of age and older: One (1) tablet every 12 hours. Not recommended for children under 12 years of age. Do not crush or chew tablets prior to swallowing.

Note: Geriatric patients may be more sensitive to the effects of the usual adult dose. Adjust adult dose accordingly.

HOW SUPPLIED

Supplied as green & white, bilayered, capsule-shaped tablets debossed "RES MX" on one side, scored on the opposite. Available in bottles of 90 tablets, NDC 64543-091-90, and sample packs of 2 tablets, NDC 64543-091-02.

KEEP THIS AND ALL MEDICATION OUT OF THE REACH OF CHILDREN. IN CASE OF ACCIDENTAL OVERDOSE, CALL A DOCTOR OR CONTACT A POISON CONTROL CENTER IMMEDIATELY.

Dispense in tight, light-resistant containers as defined in the USP/NF, with child resistant closures. Store at controlled room temperature between 20°-25°C (68°-77°F); see USP Controlled Room Temperature.

Avoid exposure to heat. Call Your Doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA1088.

Manufactured for: **Capellon Pharmaceuticals, Ltd.**
Fort Worth, TX 76118

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