

USUAL DOSAGE: Adults and children 12 years of age and older: 2 teaspoonfuls (10 mL) every 6 hours, not to exceed 8 teaspoonfuls in 24 hours. Children 6 to under 12 years of age: 1 teaspoonful (5 mL) every 6 hours, not to exceed 4 teaspoonfuls in 24 hours. Children 2 to under 6 years of age: 1/2 teaspoonful (2.5 mL) every 6 hours, not to exceed 2 teaspoonfuls in 24 hours. Children under 2 years of age: Consult a physician.

*In mild cases, or in particularly sensitive patients, less frequent or reduced doses may be appropriate and adequate.

See package insert for full prescribing information.

KEEP THIS AND ALL MEDICATIONS OUT OF THE REACH OF CHILDREN. IN CASE OF ACCIDENTAL OVERDOSE, SEEK PROFESSIONAL ASSISTANCE OR CONTACT A POISON CONTROL CENTER IMMEDIATELY.

Store at controlled room temperature, 15° - 30°C (59° - 85°F). Dispense in a tight, light-resistant container as defined in the USP/NF with a child-resistant closure.

Mfg. by: Great Southern Laboratories, Houston, TX 77059
 Div. of: Cypress Pharmaceutical, Inc., Madison, MS 39110
 L454 Rev. 1/06



NDC 60258-446-16

Bromhist-DM Pediatric Syrup

Each teaspoonful (5 mL) contains:
 Brompheniramine Maleate 2 mg
 Dextromethorphan HBr 5 mg
 Pseudoephedrine HCl 30 mg
 Guaifenesin 50 mg

**DYE FREE
 ALCOHOL FREE**

Rx Only



16 fl oz (473 mL)

**Bromhist-DM
 Pediatric Syrup**
 NDC 60258-446-16
 Rx Only

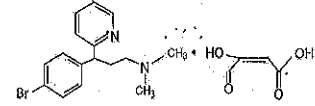
Lift Here

DESCRIPTION

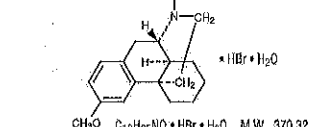
Bromhist-DM Pediatric Syrup is an expectorant, decongestant, antitussive, antihistaminic syrup for oral administration and contains the following amounts of active ingredients in each 5 mL of syrup:

Brompheniramine Maleate, USP 2 mg
 Dextromethorphan HBr, USP 5 mg
 Pseudoephedrine HCl, USP 30 mg
 Guaifenesin, USP 50 mg

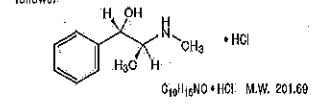
Brompheniramine maleate is an antihistamine having the chemical name, 2-pyridoguanamine-4-(bromophenyl)-N, N dimethyl-, (-)-, (2)-2-butenedioate (1:1) with the following structure:



Dextromethorphan hydrobromide is an antitussive having the chemical name, morphinan, 3-methoxy-17-methyl-, (9 α , 13 α , 14 α)-, hydrobromide, monohydrate, with the following structure:



Pseudoephedrine hydrochloride is a decongestant having the chemical name, benzenamethanol, α -[1-(methylamino)ethyl]-, [5-(R,R)-], hydrochloride. Its structure is as follows:



Bromhist-DM Pediatric Syrup
NDC 60266-448-10
Rx Only

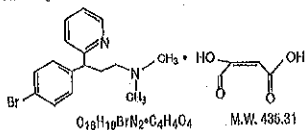
See How to Use

DESCRIPTION

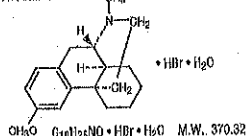
Bromhist-DM Pediatric Syrup is an expectorant, decongestant, antitussive, antihistamine syrup for oral administration and contains the following amounts of active ingredients in each 6 mL of syrup:

Brompheniramine Maleate, USP	2 mg
Dextromethorphan HBr, USP	5 mg
Pseudoephedrine HCl, USP	30 mg
Guafenesin, USP	60 mg

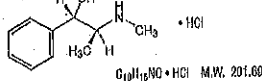
Brompheniramine maleate is an antihistamine having the chemical name, 2-(piperidinopropanamino)-4-(4-bromophenyl)-N, N-dimethyl-, (1*S*), (2*S*)-butanedioate (1:1) with the following structure:



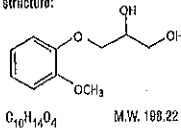
Dextromethorphan hydrobromide is an antitussive having the chemical name, morphinan, 3-methoxy-17-methyl-, (8*S*), 13*S*-, (1*S*), hydrobromide, monohydrate, with the following structure:



Pseudoephedrine hydrochloride is a decongestant having the chemical name, benzeneethanol, α-(1-(methylamino)ethyl)-, (1*S*), (1*S*)-, hydrochloride. Its structure is as follows:



Guafenesin is an expectorant having the chemical name, 1,2-propanediol, 3-(2-methoxyphenoxy), with the following structure:



Inactive Ingredients: Propylene Glycol, Glycerin, Sorbitol, Maltitol, Citric Acid, Sodium Citrate, Sodium Saccharin, Grape Flavor, Purified Water.

CLINICAL PHARMACOLOGY

Expectorant, decongestant, antitussive, and antihistamine actions.
Brompheniramine Maleate
Brompheniramine maleate is a histamine antagonist, specifically an H₁-receptor-blocking agent belonging to the alkylamine class of antihistamines. Antihistamines appear to compete with histamine for receptor sites on effector cells. Brompheniramine also has anticholinergic (drying) and sedative effects. Among the antihistamine effects, it antagonizes the allergic response (vasodilation, increased vascular permeability, increased mucus secretion) of nasal tissue. Brompheniramine is well absorbed from the gastrointestinal tract, with peak plasma concentration after a single, oral dose of 4 mg reached in 6 hours; urinary excretion is the major route of elimination, mostly as products of biodegradation; the liver is assumed to be the main site of metabolic transformation.

Dextromethorphan Hydrobromide
Dextromethorphan hydrobromide is a nonnarcotic antitussive with effectiveness equal to codeine. It acts in the medulla oblongata to elevate the cough threshold. Dextromethorphan does not produce analgesia or induce tolerance, and has no potential for addiction. The onset of antitussive action occurs in 15 to 30 minutes after administration and is of long duration. At usual doses, it will not depress respiration nor inhibit ciliary activity. Dextromethorphan is rapidly metabolized with trace amounts of the parent compound in blood and urine. About one-half of the administered dose is excreted in the urine as conjugated metabolites.

Pseudoephedrine Hydrochloride
Pseudoephedrine hydrochloride is an oral sympathomimetic amine that acts as a decongestant to respiratory tract mucous membranes:

While its vasoconstrictor action is similar to that of ephedrine, pseudoephedrine has lesspressor effect in normotensive adults. Serum half-life for pseudoephedrine is 6 to 8 hours. Active urine is associated with faster elimination of the drug. About one-half of the administered dose is excreted in the urine.

Guafenesin
Guafenesin, by increasing respiratory tract fluid, reduces the viscosity of tenacious secretions and acts as an expectorant. Guafenesin is excreted in the urine mainly as glucuronates and sulfonates.

INDICATIONS AND USAGE
Bromhist-DM Pediatric Syrup is indicated for the symptomatic relief of coughs and upper respiratory symptoms, including nasal congestion, associated with allergy or the common cold.

CONTRAINDICATIONS
Patients with hypersensitivity or idiosyncrasy to any of its ingredients. Do not use in newborn infants, premature infants, in nursing mothers, in patients with severe hypertension, severe coronary artery disease, ischemic heart disease, or in those receiving monoamine oxidase (MAO) inhibitors. Antihistamines are contraindicated in patients with narrow-angle glaucoma, urinary retention, peptic ulcer, and during an asthma attack. Antihistamines should not be used to treat lower respiratory tract conditions including asthma.

WARNINGS
Patients with persistent cough such as occurs with smoking, asthma, emphysema, or who cough is accompanied by excessive secretions should not take this product.

Use caution when giving to children or patients with chronic pulmonary disease, shortness of breath, difficulty in breathing, asthma, emphysema, high blood pressure, heart disease, diabetes, thyroid disease, or difficulty in urination due to enlargement of the prostate gland unless directed by a physician. Also use caution when giving to persons older than 60 years of age.

Antihistamines may impair mental and physical abilities required for the performance of potentially hazardous tasks, such as driving a car or operating machinery, and may impair mental alertness in children. Antihistamines may cause hypotensibility, especially in children. At doses higher than the recommended dose, nervousness, dizziness, or sleepiness may occur.

Especially in infants and small children, antihistamine in overdosage may cause hallucinations, convulsions and death.

Administration of dextromethorphan may be accompanied by histamine release and should be used with caution in atopic children.

Hypertensive crisis can occur with concurrent use of sympathomimetic amines and monoamine oxidase (MAO) inhibitors, indomethacin, or with beta-blockers and molybdopa. If a hypertensive crisis occurs, these drugs should be discontinued immediately and therapy to lower blood pressure should be instituted immediately. Fever should be managed by means of external cooling.

PRECAUTIONS

General
Before prescribing medication to suppress or modify cough, it is important to ascertain that the underlying cause of the cough is identified, that modification of cough does not increase the risk of clinical or physiologic complications, and that appropriate therapy for the primary disease is provided.

Because of its antihistamine component, Bromhist-DM Pediatric Syrup should be used with caution in patients with a history of bronchial asthma, narrow-angle glaucoma, gastrointestinal obstruction, or urinary bladder-neck obstruction.

Because of its sympathomimetic component, Bromhist-DM Pediatric Syrup should be used with caution in patients with diabetes, hypertension, heart disease, or thyroid disease.

Information for Patients
Patients should be warned about engaging in activities requiring mental alertness, such as driving a car or operating dangerous machinery. Patients should be cautioned to get up slowly from a lying or sitting position and to be down if nausea occurs.

Drug Interactions
Prescribe with caution to patients taking any of the following:

Monoamine oxidase (MAO) Inhibitors - Hypertensive crisis, hypotension, and death have been reported concomitantly with the co-administration of MAO inhibitors and products containing dextromethorphan. In addition, MAO inhibitors prolong and intensify the anticholinergic (drying) effects of antihistamines. MAO inhibitors may enhance the effect of pseudoephedrine and may produce an additive elevation of blood pressure (see WARNINGS).

Sympathomimetics - Used concurrently, may increase the effects of pseudoephedrine, thereby increasing the potential for side effects. Sympathomimetics may reduce the antihypertensive effects of molybdopa, mecamylamine, reserpine and veratrum alkaloids.

Central nervous system (CNS) depressants - Antihistamines have additive effects with alcohol and other CNS depressants (hypnotics, sedatives, tranquilizers, anti-anxiety agents, etc.).

Drug/Laboratory Test Interactions

Guafenesin has been reported to interfere with clinical laboratory determinations of urinary 5-hydroxyindoleacetic acid (5-HIAA) and urinary vanillylmandelic acid (VMA).

Carcinogenesis, Mutagenesis and Impairment of Fertility

Animal studies to assess the long-term carcinogenic and mutagenic potential or the effect on fertility in animals of humans have not been performed.

Pregnancy, Teratogenic Effects - Pregnancy Category B

Animal reproduction studies have not been conducted with Bromhist-DM Pediatric Syrup. It is also not known whether Bromhist-DM Pediatric Syrup can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Bromhist-DM Pediatric Syrup should be given to a pregnant woman only if clearly needed.

Reproduction studies of brompheniramine maleate in rats and mice at doses up to 16 times the maximum human dose have revealed no evidence of impaired fertility or harm to the fetus.

Nursing Mothers
Because of the higher risk of intolerance of antihistamines in small infants generally and in newborns and premature in particular, Bromhist-DM Pediatric Syrup is contraindicated in nursing mothers.

Pediatric Use
Safety and effectiveness of Bromhist-DM Pediatric Syrup in pediatric patients below the age of 2 have not been established.

ADVERSE REACTIONS

The most frequent adverse reactions to Bromhist-DM Pediatric Syrup include sedation; dryness of mouth, nose and throat; thickening of bronchial secretions; dizziness. Other adverse reactions may include:

Dermatologic - Urticaria, drug rash, photosensitivity and pruritus.

Cardiovascular System - Hypertension, hypotension, cardiac arrhythmias, palpitations.

Central Nervous System (CNS) - Disturbed coordination, tremor, irritability, insomnia, visual disturbances, weakness, nervousness, convulsions, headache, euphoria, and dysphoria.

G.U. System - Urinary frequency, difficult urination.

R.I. System - Epigastric discomfort, anorexia, nausea, vomiting, diarrhea or constipation.

Respiratory System - Tightness of chest and wheezing, shortness of breath.

Hematologic System - Hemolytic anemia, thrombocytopenia, agranulocytosis.

OVERDOSAGE

Signs and Symptoms
Overdosage of pseudoephedrine may be associated with CNS stimulation, tachycardia, hypertension, and cardiac arrhythmias. Dextromethorphan in toxic doses will cause drowsiness, ataxia, myoclonus, opisthoclonus and convulsive seizures. Central nervous system effects from overdosage of brompheniramine may vary from depression to stimulation, especially in children. Anticholinergic effects may also occur.

Toxic Doses

The acute toxicity of guafenesin is low and overdosage is unlikely to produce serious toxic effects. In laboratory animals no toxicity resulted when guafenesin was administered by stomach tube in doses up to 6 grams/kg. Data suggests that individuals may respond in an unexpected manner to apparently small amounts of a particular drug. A 2 1/2 year old child survived the ingestion of 21 mg/kg of dextromethorphan exhibiting only ataxia, drowsiness, and fever, but seizures have been reported in 2 children following ingestion of 13-17 mg/kg. One case of toxic psychosis (hyperaesthesia, marked visual and auditory hallucinations) after ingestion of a single 300 mg dose of dextromethorphan has been reported. The toxic dose of pseudoephedrine should be less than that of ephedrine, which is estimated to be 60 mg/kg. Another 2 1/2 year old child survived a dose of 300-900 mg of brompheniramine.

Treatment

If patient is alert and is seen prior to 6 hours induce emesis. If patient is not alert or if aspiration must be taken, especially in infants and small children. Gastric lavage may be carried out, although in some instances lavage may be necessary prior to lavage. Naloxone hydrochloride 0.005 mg/kg intravenously may be of value in reversing CNS depression that may occur from an overdose of dextromethorphan. CNS stimulants may counteract CNS depression. Should CNS hyperactivity or convulsive seizures occur, intravenous short-acting barbiturates may be indicated. Hypertensive responses and/or tachycardia should be treated appropriately. Oxygen, intravenous fluids, and other supportive measures should be employed as indicated.

DOSEAGE AND ADMINISTRATION

Adults and children 12 years of age and older: 2 teaspoonfuls (10 mL) every 6 hours, not to exceed 8 teaspoonfuls in 24 hours.

Children 6 to under 12 years of age: 1 teaspoonful (5 mL) every 6 hours, not to exceed 4 teaspoonfuls in 24 hours.

Children 2 to under 6 years of age: 1/2 teaspoonful (2.5 mL) every 6 hours, not to exceed 2 teaspoonfuls in 24 hours.

Children under 2 years of age: Consult A Physician. In mild cases or in particularly sensitive patients, less frequent or reduced doses may be appropriate and adequate.

HOW SUPPLIED

Bromhist-DM Pediatric Syrup is a clear, alcohol-free, dye-free syrup with a grape flavor available in 16 fl oz (473 mL) bottles, NDC 60266-448-16.

KEEP THIS AND ALL DRUGS OUT OF THE REACH OF CHILDREN.

Store at controlled room temperature, 16°-30° C (60°-86° F).

Dispense in a light, light-resistant container as defined in the USP&NF with a child-resistant closure.

Rx Only

Manufactured by:
Great Southern Laboratories
Houston, TX 77030

Manufactured for:
Cypress Pharmaceutical, Inc.
Madison, MS 39110

1231 Rev. 1/66