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Information for Patients: Cromolyn sodium is to be taken as directed by the physician. Because it is preventive medication, it may take up to four weeks before the patient experiences maximum benefit.

Cromolyn sodium should be used in a power-driven nebulizer with an adequate airflow rate equipped with a suitable face mask or mouthpiece.

Drug stability and safety of cromolyn sodium inhalation solution when mixed with other drugs in a nebulizer have not been established.

For additional information, see the accompanying leaflet entitled *Living a Full Life with Asthma*.

Carcinogenesis, Mutagenesis, and Impairment of Fertility: Long-term studies of cromolyn sodium in mice (12 months intraperitoneal administration at doses up to 150 mg/kg three days per week), hamsters (intraperitoneal administration at doses up to 53 mg/kg three days per week for 15 weeks followed by 17.5 mg/kg three days per week for 37 weeks), and rats (18 months subcutaneous treatment at doses up to 75 mg/kg six days per week) showed no neoplastic effects. These doses correspond to approximately 1.0, 0.3, and 2 times, respectively, the maximum recommended human daily inhalation dose on a mg/m² basis.

Cromolyn sodium showed no mutagenic potential in Ames Salmonella/microsome plate assays, mitotic gene conversion in *Saccharomyces cerevisiae* and in an *in vitro* cytogenetic study in human peripheral lymphocytes.

No evidence of impaired fertility was shown in laboratory reproduction studies conducted subcutaneously in rats at the highest doses tested, 175 mg/kg/day in males and 100 mg/kg/day in females. These doses are approximately 18 and 10 times, respectively, the maximum recommended adult human daily inhalation dose on a mg/m² basis.

Pregnancy: Teratogenic Effects, Pregnancy Category B. Reproduction studies with cromolyn sodium administered subcutaneously to pregnant mice and rats at maximum daily doses of 540 mg/kg and 164 mg/kg, respectively, and intravenously to rabbits at a maximum daily dose of 485 mg/kg produced no evidence of fetal malformations. These doses represent approximately 27, 17, and 98 times, respectively, the maximum recommended adult human daily inhalation dose on a mg/m² basis. Adverse fetal effects (increased resorption and decreased fetal weight) were noted only at the very high parenteral doses that produced maternal toxicity. There are, however, no adequate and well-controlled studies in pregnant women.

Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Drug Interaction During Pregnancy: Cromolyn sodium and isoproterenol were studied following subcutaneous injections in pregnant mice. Cromolyn sodium alone in doses up to 540 mg/kg (approximately 27 times the maximum recommended adult human daily inhalation dose on a mg/m² basis) did not cause significant increases in resorptions or major malformations. Isoproterenol alone at a dose of 2.7 mg/kg (approximately 7 times the maximum recommended adult human daily inhalation dose on a mg/m² basis) increased both resorptions and malformations. The addition of cromolyn sodium (approximately 27 times the maximum recommended adult human daily inhalation dose on a mg/m² basis) to isoproterenol (approximately 7 times the maximum recommended adult human daily inhalation dose on a mg/m² basis) appears to have increased the incidence of both resorptions and malformations.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when cromolyn sodium is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in pediatric patients below the age of 2 years have not been established.

Geriatric Use: Clinical studies of cromolyn sodium inhalation solution, USP did not include sufficient numbers of subjects aged 65 and over to determine whether they respond differently from younger subjects. Other reported clinical experience has not identified differences in responses between the elderly and younger patients.

ADVERSE REACTIONS: Clinical experience with the use of cromolyn sodium suggests that adverse reactions are rare events. The following adverse reactions have been associated with cromolyn sodium: cough, nasal congestion, nausea, sneezing, and wheezing.

Other reactions have been reported in clinical trials; however, a causal relationship could not be established: drowsiness, nasal itching, nose bleed, nose burning, serum sickness, and

stomachache.

In addition, adverse reactions have been reported with cromolyn sodium for inhalation, USP capsules. The most common side effects are associated with inhalation of the powder and include transient cough (1 in 5 patients) and mild wheezing (1 in 25 patients). These effects rarely require treatment or discontinuation of the drug.

Information on the incidence of adverse reactions to cromolyn sodium for inhalation, USP capsules has been derived from U.S. postmarketing surveillance experience. The following adverse reactions attributed to cromolyn sodium, based upon recurrence following readministration, have been reported in less than 1 in 10,000 patients: laryngeal edema, swollen parotid gland, angioedema, bronchospasm, joint swelling and pain, dizziness, dysuria and urinary frequency, nausea, cough, wheezing, headache, nasal congestion, rash, urticaria and lacrimation.

Other adverse reactions have been reported in less than 1 in 100,000 patients, and it is unclear whether these are attributable to the drug: anaphylaxis, nephrosis, periarteritic vasculitis, pericarditis, peripheral neuritis, pulmonary infiltrates with eosinophilia, polymyositis, exfoliative dermatitis, hemoptysis, anemia, myalgia, hoarseness, photodermatitis, and vertigo.

Call your doctor for medical advice about side effects. You may report side effects to Ritedose Pharmaceuticals, LLC at 1-855-806-3300 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

OVERDOSAGE: There is no clinical syndrome associated with an overdosage of cromolyn sodium. Acute toxicity testing in a wide variety of species has demonstrated that toxicity with cromolyn sodium occurs only with very high exposure levels, regardless of whether administration was parenteral, oral or by inhalation. Parenteral administration in mice, rats, guinea pigs, hamsters, and rabbits demonstrated a median lethal dose of approximately 4000 mg/kg. Intravenous administration in monkeys also indicated a similar pattern of toxicity. The highest dose administered by the oral route in rats and mice was 8000 mg/kg, (approximately 261 and 130 times, respectively, the maximum recommended human daily inhalation dose on a mg/m² basis) and at this dose level no deaths occurred. By inhalation, even in long term studies, it proved impossible to achieve toxic dose levels of cromolyn sodium in a range of mammalian species.

DOSAGE AND ADMINISTRATION: For management of bronchial asthma in adults and pediatric patients (two years of age and over), the usual starting dosage is the contents of one vial administered by nebulization four times a day at regular intervals.

Drug stability and safety of cromolyn sodium inhalation solution when mixed with other drugs in a nebulizer have not been established.

Patients with chronic asthma should be advised that the effect of cromolyn sodium inhalation solution, USP therapy is dependent upon its administration at regular intervals, as directed. Cromolyn sodium inhalation solution, USP should be introduced into the patient's therapeutic regimen when the acute episode has been controlled, the airway has been cleared and the patient is able to inhale adequately.

For the prevention of acute bronchospasm which follows exercise or exposure to cold dry air, environmental agents (e.g., animal danders, toluene diisocyanate, pollutants), etc., the usual dose is the contents of one vial administered by nebulization shortly before exposure to the precipitating factor.

It should be emphasized to the patient that the drug is poorly absorbed when swallowed and is not effective by this route of administration.

For additional information, see the accompanying leaflet entitled *“Living a Full Life with Asthma”*.

Cromolyn Sodium Inhalation Solution, USP Therapy in Relation to Other Treatments for Asthma: Non-steroidal agents: Cromolyn sodium inhalation solution, USP should be *added* to the patient's existing treatment regimen (e.g., bronchodilators). When a clinical response to cromolyn sodium inhalation solution, USP is evident, usually within two to four weeks, and if the asthma is under good control, an attempt may be made to decrease concomitant medication usage gradually.

If concomitant medications are eliminated or required on no more than a prn basis, the frequency of administration of cromolyn sodium inhalation solution, USP may be titrated downward to the lowest level consistent with the desired effect. The usual decrease is from four to three vials per day. It is important that the dosage be reduced gradually to avoid

you take cromolyn sodium, *regularly, as often as your doctor recommends, even though you have no asthma symptoms at the time*. Cromolyn sodium starts working right away but when you first begin taking it, you may have a lot of inflammation in your airways. Therefore, it may take up to two weeks (or perhaps one month) of regular treatment to bring your asthma under control. Do not stop taking cromolyn sodium or skip any doses without first talking with your doctor.

When you start using cromolyn sodium for the first time, your doctor may ask you to keep a diary showing when you have any symptoms, if and when you have trouble sleeping, how often you wheeze or cough, and other notes to help determine how effective cromolyn sodium will be to help you *prevent* asthma attacks. Your doctor may also recommend the use of a peak flow meter daily to help you better assess your progress.

While taking cromolyn sodium on a regular basis, you may need to take a bronchodilator-type medicine to treat occasional symptoms or attacks. While taking cromolyn sodium, you should continue taking your other medications until your doctor advises you otherwise.

HOW TO TAKE CROMOLYN SODIUM

Be sure to follow instructions carefully when you are shown how to take cromolyn sodium inhalation solution.

CARE AND STORAGE

Cromolyn sodium nebulizer solution should be stored at 20°-25°C (68°-77°F) [See USP Controlled Room Temperature].

Retain in foil pouch until time of use. PROTECT FROM LIGHT.

Do not use if it contains a precipitate (particles or cloudiness) or becomes discolored.

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

NOTE: In case of difficulty consult your doctor or pharmacist

RITEDOSE
PHARMACEUTICALS
Manufactured for:
Ritedose Pharmaceuticals, LLC
Columbia, SC 29203 U.S.A.

Manufactured by:
The Ritedose Corporation
Columbia, SC 29203 U.S.A.

Instructions for the Use of
CROMOLYN SODIUM INHALATION SOLUTION USP
An aqueous solution for nebulization
NOT FOR INJECTION

For best results, follow these instructions exactly and observe Care and Storage directions.

METHOD OF ADMINISTRATION

Cromolyn sodium inhalation solution is recommended for use in a power driven nebulizer operated at an airflow rate of 6-8 liters per minute and equipped with a suitable face mask. Hand-operated nebulizers are not suitable for the administration of cromolyn sodium inhalation solution. Your doctor will advise on the choice of a suitable nebulizer and how it should be used. Do not use any appliance without consulting your doctor.

Drug stability and safety of cromolyn sodium inhalation solution when mixed with other drugs in a nebulizer have not been established.

DOSAGE

Nebulization should be carried out four times a day at regular intervals, or as directed by your doctor. Use the contents of a fresh vial each time.

INHALATION

Once the nebulizer has been assembled and contains cromolyn sodium inhalation solution, hold the mask close to the patient's face and switch on the device. The patient should breathe in through the mouth and out through the nose in a normal, relaxed manner. Nebulization should take approximately five to ten minutes.



Figure 1



Figure 2

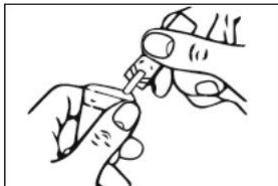


Figure 3

1. Remove a single unit-dose vial from strip (Figure 1).

2. Open the unit-dose vial by twisting off the tabbed top section (Figure 2).

3. Squeeze the contents of the unit-dose vial into the solution container of your nebulizer (Figure 3). Discard the empty unit-dose vial.

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