**cromolyn** (kroe-moe-lin)

**Classification**
Therapeutic: antiinflammatories, allergy, cold, and cough remedies
Pharmacologic: mast cell stabilizers

**Indications**

- **Inhaln:** Prophylaxis (long-term control) of bronchial asthma. Prevention of exercise-induced bronchospasm.
- **Intranasal:** Prevention and treatment of seasonal and perennial allergic rhinitis.
- **PO:** Mastocytosis. Treatment of food allergy. Treatment of inflammatory bowel disease (IBD).

**Action**

Prevents the release of histamine and slow-reacting substance of anaphylaxis (SRS-A) from sensitized mast cells. **Therapeutic Effects:** Decreased frequency and intensity of asthmatic episodes or allergic reactions.

**Pharmacokinetics**

- **Absorption:** Oral: 0.5—2%; Inhalation: Poorly absorbed systemically (total bioavailability is 8%); action is local. Small amounts may reach systemic circulation after inhalation.
- **Distribution:** Because only small amounts are absorbed, distribution is not known.
- **Metabolism and Excretion:** Small amounts absorbed are excreted unchanged in bile and urine.
- **Half-life:** 80–90 min.

**TIME/ACTION PROFILE**

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cromolyn-inhalation</td>
<td>1–2 wk</td>
<td>2–4 wk</td>
<td>unknown</td>
</tr>
<tr>
<td>Cromolyn-nasal</td>
<td>1–2 wk</td>
<td>2–4 wk</td>
<td>unknown</td>
</tr>
</tbody>
</table>

**Contraindications/Precautions**

- **Contraindicated in:** Hypersensitivity; Acute attacks of asthma (inhalation).
- **Use Cautiously in:** Renal or hepatic dysfunction; Bronchospasm—Will not relieve and may worsen acute attacks (inhalation); OB, Lactation: Safety not established; Pedi: Safety not established in children <2 yr.

**Adverse Reactions/Side Effects**

- **CNS:** dizziness, headache.
- **Derm:** rash, urticaria, angioedema.
- **EENT:** nasal irritation, nasal congestion, sneezing.
- **Resp:** irritation of the throat and trachea, cough, wheezing, bronchospasm.
- **GI:** nausea, unpleasant taste.
- **Misc:** allergic reactions including ANAPHYLAXIS or worsening of conditions being treated.

**Interactions**

- **Drug-Drug:** Not known.

**Route/Dosage**

- **Inhaln (Adults and Children ≥2 yr):** Nebulized solution: One ampule (20 mg) of the nebulizer solution 4 times daily. For prevention of bronchospasm, use one nebulized ampule (20 mg) 10–15 min before exposure to known precipitating situations.
- **Intranasal (Adults and Children ≥2 yr):** 1 spray (5.2 mg/spray) intranasal 1–2 times daily (4–6 times/day).
- **PO (Adults and Children ≥12 yr):** 200 mg 4 times a day.
- **PO (Children 2–12 yr):** 100 mg 4 times a day; not to exceed 40 mg/kg/day.

**NURSING IMPLICATIONS**

- **Assessment:**
  - Evaluate pulmonary function testing before initiating therapy in asthmatics.
  - Assess lung sounds and respiratory function before and periodically during therapy.
- **Intranasal:** Assess for symptoms of rhinitis (stuffy nose, rhinorrhea).

**Potential Nursing Diagnoses**

- Ineffective airway clearance (indications)

**Implementation**

- **Inhaln:** Medication should be used prophylactically, not during acute asthma attacks or status asthmaticus.
- **PO:** Break open and squeeze contents of ampule into a glass of water. Stir solution. Drink all of liquid. Administer 30 min before meals and at bedtime.

**Patient/Family Teaching**

- Inform patient of medication regimen and importance of compliance. Use additional medications for acute attacks.

**Assessment & Drug Effects**

- Reduction in dose of other asthma medications may be possible after 2–4 wk of therapy.
● Pretreatment with bronchodilator may be required to increase delivery of inhalation product.

● Do not use solution that is cloudy or contains a precipitate. Compatible with acetylcysteine, epinephrine, isoetharine, isoproterenol, metaproterenol, and terbutaline solutions for up to 60 min.

**Patient/Family Teaching**

● Instruct patient on correct use of medication. Medication must be used routinely and not more frequently than prescribed. Take missed doses as soon as remembered and space other doses at regular intervals. Do not double doses. Do not discontinue therapy without consulting health care professional, or exacerbation of symptoms may occur.

● Instruct patient not to discontinue concurrent corticosteroid or bronchodilator therapy without consulting health care professional.

● If cromolyn is prescribed before contact with known allergen or exercise, explain that it should be administered 10–15 min, and no earlier than 60 min, in advance.

● Inhal: Caution patient to notify health care professional if asthmatic symptoms do not improve within 4–6 hr, worsen, or recur.

● Intranasal: Instruct patient to clear nasal passages before administration and to inhale through nose during administration.

● Instruct patient to start using product up to 1 wk before coming into contact with allergen and to use every day while in contact with allergen.

**Evaluation/Desired Outcomes**

● Therapeutic effects, observable within 2–4 wk after beginning therapy, are demonstrated by:

   ● Reduction in symptoms of asthma.
   
   ● Prevention of exercise-induced bronchospasm.
   
   ● Decrease in the symptoms of allergic rhinitis.

*Why was this drug prescribed for your patient?*