Flunisolide (floo-niss-oh-lide)

**Antiseptics**

**Classification**
- Anti-inflammatories (steroidal)

**Pharmacologic: Corticosteroids**

**Pregnancy Category C**

**Indications**
Maintenance treatment of asthma as prophylactic therapy. May decrease requirement for or eliminate use of systemic corticosteroids in patients with asthma.

**Action**
Potent, locally acting anti-inflammatory and immune modifier. Therapeutic Effects: Decreased frequency and severity of asthma attacks. Improves asthma symptoms.

**Pharmacokinetics**
- **Absorption:** 40%; action is primarily local following inhalation.
- **Distribution:** Crosses placenta; enters breast milk in small amounts.
- **Metabolism and Excretion:** Metabolized by the liver following absorption from lungs; 50% excreted in urine, 50% in feces.
- **Half-life:** 1.8 hr.

**TIME/ACTION PROFILE (improvement in symptoms)**

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>within 24 hr</td>
<td>1–4 wk†</td>
<td>unknown</td>
</tr>
</tbody>
</table>

†Improvement in pulmonary function; airway responsiveness may take longer.

**Contraindications/Precautions**
- **Contraindicated in:** Hypersensitivity, Acute attack of asthma/status asthmaticus.
- **Use Cautiously in:** Active untreated infections; Diabetes or glaucoma; Underlying immunosuppression (due to disease or concurrent therapy); Systemic corticosteroid therapy (should not be abruptly discontinued when inhaled therapy is started; additional corticosteroids may be needed in stress or trauma); OB, Lactation, Pedi: Pregnancy, lactation, or children <6 yr (safety not established; prolonged or high-dose therapy may lead to complications).

**Adverse Reactions/Side Effects**
- **CNS:** Headache, dizziness, irritability, nervousness.
- **CV:** Palpitations.
- **EENT:** Hoarseness, nasal congestion, pharyngitis, dysphonia, oropharyngeal fungal infections, rhinitis, sinusitis.
- **Resp:** Bronchospasm, cough, wheezing.
- **Skin:** Rash.
- **GI:** Diarrhea, nausea, taste disturbances, vomiting, abdominal pain, anorexia, dry mouth.
- **GU:** Menstrual disturbances.
- **Endo:** Adrenal suppression (high-dose, long-term therapy only), growth (children).

**Drug Interactions**
- None known.

**Route/Dosage**
- **Inhaln (Adults and Children ≥12 yr):** 160 mcg (2 inhalations) twice daily (not to exceed 4 inhalations twice daily).
- **Inhaln (Children 6–11 yr):** 80 mcg (1 inhalation) twice daily (not to exceed 2 inhalations twice daily).

**NURSING IMPLICATIONS**
- **Assessment**
  - Monitor respiratory status and lung sounds. Pulmonary function tests may be assessed periodically during and for several months following a transfer from systemic to inhalation corticosteroids.
  - Assess patients changing from systemic to inhalation corticosteroids for signs of adrenal insufficiency (anorexia, motor weakness, fatigue, hypotension, hypoglycemia) during initial therapy and periods of stress. If these signs appear, notify health care professional immediately; condition may be life-threatening.
  - Monitor for withdrawal symptoms (joint or muscular pain, lassitude, depression) during withdrawal from oral corticosteroids.
  - Monitor growth in children in long-term therapy; use lowest possible dose.

**NURSING CONSIDERATIONS**
- **Contraindications:** None known.
- **Route/Dosage:** None known.
- **Effects:** None known.
- **Interactions:** None known.
- **Monitor:** None known.
Potential Nursing Diagnoses
Ineffective airway clearance (Indications)
Risk for infection (Side Effects)
Deficient knowledge, related to medication regimen (Patient/Family Teaching)

Implementation
- After the desired clinical effect has been obtained, attempts should be made to decrease dose to lowest amount required to control symptoms. Gradually decrease dose every 2–4 wk as long as desired effect is maintained. If symptoms return, dose may briefly return to starting dose.
- Inhalation: Allow at least 1 min between inhalations of aerosol medication.

Patient/Family Teaching
- Advise patient to take medication as directed. Take missed doses as soon as remembered unless almost time for next dose. Advise patient not to discontinue medication without consulting health care professional; gradual decrease is required.
- Advise patients using inhalation corticosteroids and bronchodilator to use bronchodilator first and to allow 5 min to elapse before administering the corticosteroid, unless otherwise directed by health care professional.
- Advise patient that inhalation corticosteroids should not be used to treat acute asthma attack but should be continued even if other inhalation agents are used.
- Patients using inhalation corticosteroids to control asthma may require systemic corticosteroids for acute attacks. Advise patient to use regular peak flow monitoring to determine respiratory status.
- Caution patient to avoid smoking, known allergens, and other respiratory irritants.
- Advise patient to notify physician if sore throat or mouth occurs.
- Instruct patient whose systemic corticosteroids have been recently reduced or withdrawn to carry a written warning card indicating the need for supplemental systemic corticosteroids in the event of stress or severe asthma attack unresponsive to bronchodilators.
- Metered-Dose Inhaler: Instruct patient in the proper use of the metered-dose inhaler. Most inhalers require priming prior to first use. Exhale completely and then close lips firmly around mouthpiece. While breathing in deeply and slowly, press down on canister. Rinse mouth with water or mouthwash after each use to minimize fungal infections, dry mouth, and hoarseness.

Evaluation/Desired Outcomes
- Management of the symptoms of chronic asthma.
- Improvement in asthma symptoms.

Why was this drug prescribed for your patient?