**dextromethorphan** (dex-troe-meth-or-fan)

<table>
<thead>
<tr>
<th>Name</th>
<th>Brand Name</th>
<th>Therapeutic</th>
<th>Pregnancy Category</th>
<th>Indications</th>
<th>Action</th>
<th>Pharmacokinetics</th>
<th>Metabolism and Excretion</th>
<th>Half-Life</th>
<th>Nursing Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
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**Indications**

Symptomatic relief of coughs caused by minor viral upper respiratory tract infections or inhaled irritants. Most effective for chronic nonproductive cough. A common ingredient in nonprescription cough and cold preparations.

**Action**

Suppresses the cough reflex by a direct effect on the cough center in the medulla. Related to opioids structurally but has no analgesic properties.

**Therapeutic Effects:**

Relief of irritating nonproductive cough.

**Pharmacokinetics**

**Absorption:** Rapidly absorbed from the GI tract. Extended-release product is slowly absorbed.

**Distribution:** Unknown. Probably crosses the placenta and enters breast milk.

**Metabolism and Excretion:** Metabolized to dextrorphan, an active metabolite. Dextromethorphan and dextrorphan are renally excreted.

**Half-Life:** Unknown.

**Contraindications/Precautions**

**Contraindicated in:** Hypersensitivity; Patients taking MAO inhibitors or SSRIs; Should not be used for chronic productive coughs; Some products contain alcohol and should be avoided in patients with known intolerance.

**Use Cautiously in:** Cough that lasts more than 1 wk or is accompanied by fever, rash, or headache—health care professional should be consulted; History of drug abuse or drug-seeking behavior (capsules have been abused resulting in deaths); Diabetes (some products contain sucrose); OB: Pregnancy (has been used safely); Lactation: Lactation; Pedi: Children (OTC cough and cold products containing this medication should be avoided). 

**Adverse Reactions/Side Effects**

**CNS:**

high dose—dizziness, sedation.

**GI:**

nausea.

**Interactions**

**Drug-Drug:** Use with MAO inhibitors may result in serotonin syndrome (nausea, confusion, changes in BP); concurrent use should be avoided. CNS depression with antihistamines, alcohol, antidepressants, sedative/hypnotics, or opioids. Amiodarone, fluoxetine, or quinidine may raise blood levels and adverse reactions from dextromethorphan.

**Route/Dosage**

**PO (Adults and Children ≥12 yr):** 10–20 mg q 4 hr or 10 mg q 6–8 hr or 50 mg of extended-release preparation bid (not to exceed 120 mg/day).

**PO (Children 6–12 yr):** 5–10 mg q 4 hr or 15 mg q 6–8 hr or 30 mg of extended-release preparation q 12 hr (not to exceed 60 mg/day).

**PO (Children 6–12 yr):** 5–10 mg q 4 hr or 15 mg q 6–8 hr or 30 mg of extended-release preparation q 12 hr (not to exceed 60 mg/day).

**NURSING IMPLICATIONS**

**Assessment**

Assess frequency and nature of cough, lung sounds, and amount and type of sputum produced. Visit contraindicated, maintain fluid intake of 1000–2000 mL to decrease viscosity of bronchial secretions.
Potential Nursing Diagnoses

Ineffective airway clearance (Indications)

Implementation

- Dextromethorphan 15–30 mg is equivalent in cough suppression to codeine 8–15 mg.
- PO: Do not give fluids immediately after administering to prevent dilution of vehicle. Shake oral suspension well before administration.

Patient/Family Teaching

- Instruct patient to cough effectively: Sit upright and take several deep breaths before attempting to cough.
- Advise patient to minimize cough by avoiding irritants, such as cigarette smoke, fumes, and dust. Humidification of environmental air, frequent sips of water, and sugarless hard candy may also decrease the frequency of dry, irritating cough.
- Caution patient to avoid taking more than the recommended dose or taking alcohol or other CNS depressants concurrently with this medication; fatalities have occurred. Caution patients to avoid OTC cough and cold products while breast-feeding or to children ≤6 yrs.
- May occasionally cause dizziness. Caution patient to avoid driving or other activities requiring alertness until response to the medication is known.
- Advise patient that any cough lasting over 1 wk or accompanied by fever, chest pain, persistent headache, or skin rash warrants medical attention.

Evaluation/Desired Outcomes

- Decrease in frequency and intensity of cough without eliminating patient’s cough reflexes.

Why was this drug prescribed for your patient?