HYDROcodone
(hye-droe-koe-done)

<table>
<thead>
<tr>
<th>Classification</th>
<th>Therapeutic:</th>
<th>Pharmacologic:</th>
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</thead>
<tbody>
<tr>
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<td>allergy, cold, and cough remedies (antitussive), opioid analgesics</td>
<td>opioid agonists/nonopioid analgesic combinations</td>
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Schedule II (Zohydro ER)III (in combination)

**Indications**

Extended-release product: Management of pain that is severe enough to warrant daily, around-the-clock, long-term opioid treatment where alternative treatment options are inadequate. Combination products: Management of moderate to severe pain. Antitussive (usually in combination products with decongestants).

**Action**

Binds to opiate receptors in the CNS. Alter the perception of and response to painful stimuli while producing generalized CNS depression: Suppress the cough reflex via a direct central action. Therapeutic Effects: Decrease in severity of moderate pain.

**Pharmacokinetics**

Absorption: Well absorbed following oral administration.

Distribution: Unknown.

Metabolism and Excretion: Mostly metabolized by the liver, eliminated in the urine (50–60% as metabolites, 15% as unchanged drug).

**Half-life:** 2.2 hr; Extended-release—8 hr.

**Contraindications/Precautions**

Contraindicated in: Hypersensitivity to hydrocodone (cross-sensitivity may exist to other opioids); Significant respiratory depression; Paralytic ileus; Acute or severe bronchial asthma or hypercarbia; Hypersensitivity to acetaminophen/ibuprofen (for combination products). Ibuprofen-containing products should be avoided in patients with bleeding disorders or thrombocytopenia; Patients with undiagnosed abdominal pain; Prostatic hyperplasia.

**Adverse Reactions/Side Effects**

CNS: confusion, dizziness, sedation, euphoria, hallucinations, headache, unusual dreams.

EENT: blurred vision, diplopia, miosis.

Resp: respiratory depression.

CV: hypotension, bradycardia.

GI: constipation, dyspepsia, nausea, vomiting.

GU: urinary retention.

Derm: sweating.

Misc: physical dependence, psychological dependence, tolerance.

**Drug Interactions**

Use with extreme caution in patients receiving MAO inhibitors (may produce severe, unpredictable reactions — do not use within 14 days of each other). CYP3A4 inhibitors may increase levels and effects. CYP3A4 inducers may decrease levels and effects.

**FDA Pregnancy Category:**

C

**Lactation:** Avoid chronic use; Products containing alcohol, aspartame, saccharin, sugar, or tartrazine (FDC yellow dye #5) should be avoided in patients who have hypersensitivity or intolerance to these compounds.

**Overdosage:**

Hypotension, bradycardia, respiratory depression, shock, cardiac arrest, coma. Symptomatic treatment supported by general measures. Gastric lavage may be helpful if performed within 45 min of ingestion. Vasopressors, assisted ventilation, and cardiac monitoring may be necessary.

**Dosage and Administration**

**ROUTE** | **ONSET** | **PEAK** | **DURATION**
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For additional information on the acetaminophen and ibuprofen components of these formulations, see the acetaminophen and ibuprofen monographs.

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Hydrocodone

0.6 mg/kg/day divided q 6–8 hr; (maximum doses vary by patient).

Antitussive—tablets/day of ibuprofen-containing products; products, acetaminophen dosage should not exceed 4 g/day and should not exceed 5

● An equianalgesic chart (see Appendix B) should be used when changing routes or when changing from one opioid to another.

● Pain:

Assess bowel function routinely. Prevention of constipation should be instituted with increased intake of fluids and bulk, and laxatives to minimize constipating effects. Stimulant laxatives should be administered routinely if opioid use exceeds 2–3 days, unless contraindicated.

Assess type, location, and intensity of pain prior to and 1 hr (peak) following administration. When titrating opioid doses, increases of 25–50% should be sufficient to prevent significant hypoventilation. Dose may need to be decreased by 25–50%. Initial drowsiness will diminish with continued use.

If respiratory rate is >20/min, assess level of sedation. Physical stimulation may be necessary.

If respiratory rate is <10/min, assess level of sedation. Physical stimulation may be necessary.

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● Lab Test Considerations: May cause ↑ plasma anhydride and lipase concentrations.

● Potentially Overdosed: If an opioid antagonist is required to reverse respiratory depression or coma, naloxone is the antidote. Dilute the 0.4-mg ampule of naloxone in 10 mL of 0.9% NaCl and administer 0.02 mg by direct IV push every 2 min. For children and patients weighing >40 kg, 0.01 mg of ad-

Prolonged use may lead to physical and psychological dependence and tolerance. This should not prevent patients from receiving adequate analgesia. Most patients who receive opioids for pain do not develop psychological dependence. If progressively higher doses are required, consider conversion to a stronger opioid.

Accidental overdose of opioid analgesics has resulted in fatalities. Before administering, clarify all ambiguous orders; have second practitioner independently check original order and dose calculations.

Do not confuse hydrocodone with oxycodone. Do not confuse Reprexain with Zyprexa.

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High Alert: Concurrent use of benzodiazepines and opioids can result in additive CNS depression.

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Patient/Family Teaching

Advise patient to take medication as directed and not to take more than the recom-
Use or high doses of acetaminophen. Renal damage may occur with prolonged use of acetaminophen or ibuprofen. Doses of nonsteroidal agents should not exceed the maximum recommended daily dose. Do not stop taking without discussing with health care professional; may cause withdrawal symptoms if discontinued abruptly after prolonged use.

- Instruct patient on how and when to ask for and take pain medication.
- Advise patient that hydrocodone is a drug with known abuse potential. Protect it from theft, and never give to anyone other than the individual for whom it was prescribed.
- May cause drowsiness or dizziness. Advise patient to call for assistance when ambulating or smoking. Caution patient to avoid driving or other activities requiring alertness until response to the medication is known.
- Advise patient to notify health care professional/pain control is not adequate or if side effects occur.
- Advise patient to change positions slowly to minimize orthostatic hypotension.
- Caution patient to avoid concurrent use of alcohol or other CNS depressants with this medication.
- Instruct patient to notify health care professional of all Rx or OTC medications, vitamins, or herbal products being taken and consult health care professional before taking any new medications.
- Emphasize the importance of aggressive prevention of constipation with the use of hydrocodone.
- Encourage patient to turn, cough, and breathe deeply every 2 hr in prevent atelectasis.
- Advise patient that good oral hygiene, frequent mouth rinses, and sugarless gum or candy may decrease dry mouth.
- Advise patient to notify health care professional if pregnancy is planned or suspected, or if breast feeding.

**Evaluation/Desired Outcomes**

- Decrease in severity of pain without a significant alteration in level of consciousness or respiratory status.
- Suppression of nonproductive cough.

Why was this drug prescribed for your patient?