pentazocine (pen-taz-oh-seen)

Talwin, Talwin NX

Classification
Therapeutic: opioid analgesics
Pharmacologic: opioid agonist/antagonist

Schedule IV

Pregnancy Category C

Indications
Moderate to severe pain. Also used for: Analgesia during labor, Sedation prior to surgery, Supplementation in balanced anesthesia.

Action
Binds to opiate receptors in the CNS. Alters perception of and response to painful stimuli, while producing generalized CNS depression. Has partial antagonist properties, which may result in opioid withdrawal in physically dependent patients.

Therapeutic Effects: Decrease in moderate to severe pain.

Pharmacokinetics
Absorption: Well absorbed following oral, IM, and subcut administration. Small amount (0.5 mg) of naloxone in tablets included to prevent parenteral abuse.

Distribution: Widely distributed. Crosses the placenta.

Metabolism and Excretion: Mostly metabolized by the liver. Small amounts excreted unchanged by the kidneys.

Half-life: 2–3 hr.

TIME/ACTION PROFILE (analgesia)

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO</td>
<td>15–30 min</td>
<td>60–90 min</td>
<td>3 hr</td>
</tr>
<tr>
<td>IM, subcut</td>
<td>15–20 min</td>
<td>30–60 min</td>
<td>2–3 hr</td>
</tr>
<tr>
<td>IV</td>
<td>2–3 min</td>
<td>15–30 min</td>
<td>2–3 hr</td>
</tr>
</tbody>
</table>

Contraindications/Precautions
Contraindicated in: Hypersensitivity; Patients who are physically dependent on opioids (may precipitate withdrawal).

Use Cautiously in: Head trauma; History of drug abuse; Severe renal, hepatic, or pulmonary disease; Hypothyroidism; Adrenal insufficiency; Alcoholics; Delirium tremens patients; or patients with severe liver impairment (dose [not recommended]); Undiagnosed abdominal pain; Precipitated hyperpyrexia. Patients who have recently received opioid agonist. GI: Has been used during labor but may cause respiratory depression in the newborn. Lactation: Use not established; Geri: Appears on BEERS list and is associated with ↑ risk of falls. More susceptible to adverse CNS effects; dose ↓ recommended.

Adverse Reactions/Side Effects
CNS: Nausea, vomiting, hallucinations, headache, confusion, dysphoria, floating, dizziness, unusual dreams, impaired concentration, memory impairment, drowsiness, sedation, dysphoria, floating feeling, unusual dreams.

EENT: Blurred vision, diplopia, miosis (high doses).

Resp: Respiratory depression.

CV: Hypertension, hypotension, palpitations.

GI: Nausea, constipation, ileus, vomiting.

GU: Urinary retention.

Derm: Clammy feeling, sweating.

Local: Severe tissue damage at subcut sites.

Misc: Physical dependence, psychological dependence, tolerance.

Interactions
Drug-Drug: Use with caution in patients receiving MAO inhibitors (may result in unpredictable reactions—↓ initial dose of pentazocine to 25% of usual dose). Additive CNS depression with alcohol, antihistamines, and sedative/hypnotics. May precipitate withdrawal in patients who are physically dependent on opioid analgesic agonists. May ↓ analgesic effects of other opioids.

Drug-Natural Products: Concomitant use of kava-kava, valerian, or chamomile can ↑ CNS depression.

Route/Dosage
PO (Adults): 50–100 mg q 3–4 hr (not to exceed 600 mg/day).

Subcut, IV, IM (Adults): 30 mg q 3–4 hr (not to exceed 30 mg/dose IV or 60 mg/dose IM or subcut; not to exceed 360 mg/day subcut, IV, or IM; effectiveness lost at 10 mg IV or 30 mg IM when contractions become regular, may repeat 2–3 hr for 2–3 doses.

NURSING IMPLICATIONS
Assessment
- Monitor type, location, and intensity of pain prior to and 1 hr following PO, subcut, or IM and 15–30 min (peak) following IV administration. When titrating opioid
- Assess physical, psychological, and social dependence and tolerance.
- Be alert for respiratory depression in high-risk patients or those receiving concomitant sedatives or opioids.

Interventions
- Ensure appropriate monitoring during and immediately after administration.
- Ensure IV usage under constant monitoring.
- Monitor intake and output ratios. Observe for GI distress. Implement fluid management plan to maintain adequate hydration.
- Monitor vital signs, respiration, and bowel sounds. Observe for signs suggestive of CNS depression.
- Obtain baseline arterial blood gases (ABGs) and repeat throughout therapy. Be alert for respiratory depression in high-risk patients or those receiving concomitant sedatives or opioids.
- Counsel patient to use only as directed and to take exactly as prescribed.
Pentazocine

Implementation

High Alert: 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. Explain therapeutic value of medication prior to administration to enhance the analgesic effect.

Regularly administered doses may be more effective than prn administration. Analgesia in more effective if administered before pain becomes severe. Concomitant use of nonopioid analgesics may enhance the analgesic effect.

Acute pain (Indications)

Disturbed sensory perception (visual, auditory) (Side Effects)

Risk for injury (Side Effects)

Acute pain (Indications)

Potential Nursing Diagnoses

Toxicity and Overdose:

● Lab Test Considerations:

○ Y-Site Compatibility:

- Direct IV: Manufacturer recommends diluting each 5 mg with at least 1 mL of sterile water for injection. Concentration: 1 mg/mL. Rate: Administer slowly, each 5 mg over at least 1 min.

- Y-Site Compatibility: amikacin, amphotericin B lipid complex, amiodarone, ascorbic acid, aztreonam, atropine, benzphetamine, benzylamine, benztropine, biphenylyl, bisoprolol, calcium chloride, calcium gluconate, cefepime, cefoperazone, cephalothin, cephapirin, cefuroxime, ciprofloxacin, clindamycin, cyclosporine, diazepam, diltiazem, dobutamine, dopamine, doxycycline, enalaprilat, epinephrine, epirubicin, epinephrine, famotidine, fenoldopam, fluconazole, fludarabine, gemcitabine, gentamicin, glycopyrrolate, granisetron, hetastarch, idarubicin, insulin, irinotecan, isoproterenol, labetalol, lidocaine, linezolid, magnesium sulfate, mannitol, mechlorethamine, melphalan, midazolam, milrinone, mitoxantrone, morphine, meperidine, metaraminol, methoxamine, methyldopa, metoclopramide, metocurine, metoprolol, metoprolol, nalbuphine, nafarelin, neostigmine, norepinephrine, nitroglycerin, ocrevus, ondansetron, oxaliplatin, pantoprazole, pentazocine, pentoxyfylline, piperacillin, potassium chloride, proflavine, propranolol, proscillaridin, quinupristin, ranitidine, rasburicase, tacrolimus, teniposide, thiopental, tropisetron, tyloxapol, vancomycin, verapamil, vinblastine, vincristine, vincristine, voriconazole, warfarin, zidovudine.
Continued:

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Plastic, resins, epichlorohydrin, polyacrylates, polyesters, polyurethanes, polyacrylate, potassium chloride, procainamide, prednisolone, promethazine, propoxycaine, promethazine, propoxyphene, serotonin, succinylcholine, sulfonamides, tetracycline, theophylline, thiamine, triamterene, trimethoprim, troleandomycin, trimethoprim, vancomycin, tetracycline, vecuronium, tizanidine, vitamin B complex, vitamin K, acetaminophen, calcium carbonate.

**Y-Site Incompatibility:** amphotericin B colloidal, ampicillin, amphotericin B liposomal, amphotericin B lipid complex, azathioprine, aztreonam, bivalirudin, cefazolin, ceftazidime, cefotaxime, cefotetan, cefoxitin, ceftazidime, ceftriaxone, cefuroxime, chloramphenicol, diclofenac, dexamethasone, dexamethasone, furosemide, ganciclovir, indomethacin, ketorolac, methylprednisolone, nafcillin, nitrofurantoin, penicillin G, pentobarbital, phenobarbital, phenytoin, piperacillin/tazobactam, sodium bicarbonate, ticarcillin, trimethoprim/sulfamethoxazole.

**Patient/Family Teaching**

- Instruct patient on how and when to ask for pain medication.
- Medication may cause drowsiness, dizziness, or hallucinations, particularly in geriatric patients. Advise patient to call for assistance when ambulating and to avoid driving or other activities requiring alertness until response to medication is known. Institute fall prevention strategies and teach patient or family how to prevent falls at home.
- Caution patient to change postures slowly to minimize orthostatic hypotension.
- Advise patient to avoid concurrent use of alcohol and other CNS depressants.
- Encourage patient to turn, cough, and breathe deeply every 2 hr to prevent atelectasis.
- Advise patient that frequent mouth rinses, good oral hygiene, and sugarless gums or candy may decrease dry mouth.

**Evaluation/Desired Outcomes**

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

Why was this drug prescribed for your patient?