prochlorperazine (proe-klor-**pair**-a-zeen)

~~Compazine~~, Compro, ✱ Prochlorazine

Classification

Therapeutic: antiemetics, antipsychotics
Pharmacologic: phenothiazines

Pregnancy Category C

Indications

Management of nausea and vomiting. Treatment of psychoses. Treatment of anxiety.

Action

Alters the effects of dopamine in the CNS. Possesses significant anticholinergic and alpha-adrenergic blocking activity. Depresses the chemoreceptor trigger zone (CTZ) in the CNS. **Therapeutic Effects:** Diminished nausea and vomiting. Diminished signs and symptoms of psychoses or anxiety.

Pharmacokinetics

Absorption: Absorption from tablet is variable; may be better with oral liquid formulations. Well absorbed after IM administration.
Distribution: Widely distributed, high concentrations in the CNS. Crosses the placenta and probably enters breast milk.
Protein Binding: ≥90%.
Metabolism and Excretion: Highly metabolized by the liver and GI mucosa. Converted to some compounds with antipsychotic activity.
Half-life: Unknown.

TIME/ACTION PROFILE (antiemetic effect)

ROUTE	ONSET	PEAK	DURATION
PO	30–40 min	unknown	3–4 hr
Rect	60 min	unknown	3–4 hr
IM	10–20 min	10–30 min	3–4 hr
IV	rapid (min)	10–30 min	3–4 hr

Contraindications/Precautions

Contraindicated in: Hypersensitivity; Cross-sensitivity with other phenothiazines may exist; Angle-closure glaucoma; Bone marrow depression; Severe liver or cardiovascular disease; Hypersensitivity to bisulfites or benzyl alcohol (some parenteral products); ***Pedi:*** Children <2 yr or <9.1 kg.
Use Cautiously in: Diabetes mellitus; Respiratory disease; Prostatic hypertrophy; CNS tumors; Epilepsy; Intestinal obstruction; ***OB, Lactation:*** Safety not established; ***Geri:*** Dose ↓ recommended; ↑ risk of mortality in elderly patients treated for dementia-related psychosis.

Adverse Reactions/Side Effects

CNS: NEUROLEPTIC MALIGNANT SYNDROME, extrapyramidal reactions, sedation, tardive dyskinesia. **EENT:** blurred vision, dry eyes, lens opacities. **CV:** ECG changes, hypotension, tachycardia. **GI:** constipation, dry mouth, anorexia, drug-induced hepatitis, ileus. **GU:** pink or reddish-brown discoloration of urine, urinary retention. **Derm:** photosensitivity, pigment changes, rashes. **Endo:** galactorrhea. **Hemat:** AGRANULOCYTOSIS, leukopenia. **Metab:** hyperthermia. **Misc:** allergic reactions.

Interactions

Drug-Drug: Additive hypotension with **antihypertensives**, **nitrates**, or acute ingestion of **alcohol**. Additive CNS depression with other **CNS depressants**, including **alcohol**, **antidepressants**, **antihistamines**, **opioid analgesics**, **sedative/hypnotics**, or **general anesthetics**. Additive anticholinergic effects with other **drugs possessing anticholinergic properties**, including **antihistamines**, some **antidepressants**, **atropine**, **haloperidol**, and other **phenothiazines**. **Lithium** ↑ risk of extrapyramidal reactions. May mask early signs of **lithium** toxicity. ↑ risk of agranulocytosis with **antithyroid agents**. ↓ beneficial effects of **levodopa**. **Antacids** may ↓ absorption.
Drug-Natural Products: Concomitant use of **kava-kava**, **valerian**, **chamomile**, or **hops** can ↑ CNS depression. ↑ anticholinergic effects with **angel's trumpet**, **jimson weed**, and **scopolia**.

Route/Dosage

Pediatric dose should not exceed 10 mg on the 1st day and then should not exceed 20 mg/day in children 2–5 yr or 25 mg/day in children 6–12 yr.

Antiemetic

PO (Adults and Children ≥12 yr): 5–10 mg 3–4 times daily (not to exceed 40 mg/day).
PO (Children 18–39 kg): 2.5 mg 3 times daily *or* 5 mg twice daily (not to exceed 15 mg/day).

PO (Children 14–17 kg): 2.5 mg 2–3 times daily (not to exceed 10 mg/day).
PO (Children 9–13 kg): 2.5 mg 1–2 times daily (not to exceed 7.5 mg/day).
IM (Adults and Children ≥12 yr): 5–10 mg q 3–4 hr as needed. *Nausea/vomiting associated with surgery*—5–10 mg; may be repeated once.
IM (Children 2–12 yr): 132 mcg (0.132 mg)/kg; usually only 1 dose is required.
IV (Adults and Children ≥12 yr): 2.5–10 mg (not to exceed 40 mg/day). *Nausea/vomiting associated with surgery*—5–10 mg; may be repeated once.
Rect (Adults): 25 mg twice daily.
Rect (Children 18–39 kg): 2.5 mg 3 times daily or 5 mg twice daily (not to exceed 15 mg/day).
Rect (Children 14–17 kg): 2.5 mg 2–3 times daily (not to exceed 10 mg/day).
Rect (Children 9–13 kg): 2.5 mg 1–2 times daily (not to exceed 7.5 mg/day).

Antipsychotic

PO (Adults and Children ≥12 yr): 5–10 mg 3–4 times daily; may be ↑ q 2–3 days (up to 150 mg/day).
PO (Children 2–12 yr): 2.5 mg 2–3 times daily.
IM (Adults): 10–20 mg q 2–4 hr for up to 4 doses, then 10–20 mg q 4–6 hr (up to 200 mg/day).
IM (Children 2–12 yr): 132 mcg (0.132 mg)/kg (not to exceed 10 mg/dose).
IV (Adults and Children ≥12 yr): 2.5–10 mg (up to 40 mg/day).
Rect (Adults): 10 mg 3–4 times daily; may be ↑ by 5–10 mg q 2–3 days as needed.

Antianxiety

PO (Adults and Children ≥12 yr): 5 mg 3–4 times daily (not to exceed 20 mg/day or longer than 12 wk).
IM (Adults and Children ≥12 yr): 5–10 mg q 3–4 hr as needed (up to 40 mg/day).
IM (Children 2–12 yr): 132 mcg (0.132 mg)/kg.
IV (Adults): 2.5–10 mg (up to 40 mg/day).

NURSING IMPLICATIONS

Assessment

- Monitor BP (sitting, standing, lying down), ECG, pulse, and respiratory rate before and frequently during the period of dosage adjustment. May cause Q-wave and T-wave changes in ECG.
- Assess patient for level of sedation after administration.
- Monitor patient for onset of akathisia (restlessness or desire to keep moving) and extrapyramidal side effects (*parkinsonian*—difficulty speaking or swallowing, loss of balance control, pill rolling, mask-like face, shuffling gait, rigidity, tremors; and *dystonic*—muscle spasms, twisting motions, twitching, inability to move eyes, weakness of arms or legs) every 2 mo during therapy and 8–12 wk after therapy has been discontinued. Report these symptoms; reduction in dose or discontinuation may be necessary. Trihexyphenidyl or diphenhydramine may be used to control these symptoms.
- Monitor for tardive dyskinesia (uncontrolled rhythmic movement of mouth, face, and extremities; lip smacking or puckering; puffing of cheeks; uncontrolled chewing; rapid or worm-like movements of tongue). Report immediately; may be irreversible.
- **Monitor for development of neuroleptic malignant syndrome (fever, respiratory distress, tachycardia, seizures, diaphoresis, hypertension or hypotension, pallor, tiredness, severe muscle stiffness, loss of bladder control). Notify health care professional immediately if these symptoms occur.**
- **Antiemetic:** Assess patient for nausea and vomiting before and 30–60 min after administration.
- **Antipsychotic:** Monitor patient's mental status (orientation to reality and behavior) before and periodically during therapy.
- Observe patient carefully when administering oral medication to ensure that medication is actually taken and not hoarded.
- Assess fluid intake and bowel function. Increased bulk and fluids in the diet may help minimize constipation.
- **Anxiety:** Assess degree and manifestations of anxiety and mental status before and periodically during therapy.
- ***Lab Test Considerations:*** **CBC and liver function tests should be evaluated periodically during therapy. May cause blood dyscrasias, especially between wk 4 and 10 of therapy. Hepatotoxicity is more likely to occur between wk 2 and 4 of therapy. May recur if medication is restarted. Liver function abnormalities may require discontinuation of therapy.**
- May cause false-positive or false-negative pregnancy test results and false-positive urine bilirubin test results.
- May cause ↑ serum prolactin levels.

Potential Nursing Diagnoses

Deficient fluid volume (Indications)
Disturbed thought process (Indications)

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prochlorperazine

Implementation

- To prevent contact dermatitis, avoid getting solution on hands.
- Phenothiazines should be discontinued 48 hr before and not resumed for 24 hr after myelography; they lower seizure threshold.
- **PO:** Administer with food, milk, or a full glass of water to minimize gastric irritation.
- **IM:** Do not inject subcut. Inject slowly, deep into well-developed muscle. Keep patient recumbent for at least 30 min after injection to minimize hypotensive effects. Slight yellow color will not alter potency. Do not administer solution that is markedly discolored or that contains a precipitate.

IV Administration

- **Direct IV:** ***Concentration:*** Dilute to a concentration of 1 mg/mL. ***Rate:*** Administer at a rate of 1 mg/min; not to exceed 5 mg/min.
- **Intermittent Infusion:** ***Diluent:*** Dilute 20 mg in up to 1 L dextrose, saline, Ringer's or LR, dextrose/saline, dextrose/Ringer's, or lactated Ringer's combinations.
- **Continuous Infusion:** Has been used as infusion with 20 mg/L of compatible solution.
- **Y-Site Compatibility:** acetaminophen, alemtuzumab, alfentanil, amikacin, amsarcine, anidulafungin, argatroban, ascorbic acid, atracurium, atropine, benztropine, bleomycin, bumetanide, buprenorphine, butorphanol, carboplatin, carmustine, caspofungin, chlorpromazine, cisatracurium, cisplatin, cladribine, cyanocobalamin, cyclophosphamide, cyclosporine, cytarabine, dactinomycin, daptomycin, dexmedetomidine, dexrazoxane, digoxin, diltiazem, diphenhydramine, dobutamine, docetaxel, dolasetron, dopamine, doxacurium, doxorubicin hydrochloride, doxorubicin liposome, doxycycline, enalaprilat, ephedrine, epinephrine, epirubicin, eptifibatide, erythromycin, esmolol, etoposide, famotidine, fentanyl, fluconazole, gentamicin, glycopyrrolate, granisetron, hetastarch, hydrocortisone sodium succinate, hydromorphone, idarubicin, ifosfamide, irinotecan, isoproterenol, labetalol, leucovorin calcium, lidocaine, linezolid, magnesium sulfate, mannitol, mechlorethamine, melphalan, meperidine, methotrexate, methyldopate, methylprednisolone, metoclopramide, metoprolol, metronidazole, milrinone, morphine, moxifloxacin, multivitamins, mycophenolate, nafcillin, nalbuphine, naloxone, nicardipine, nesiritide, nitroglycerin, norepinephrine, octreotide, ondansetron, oxacillin, oxaliplatin, oxytocin, paclitaxel, palonosetron, pamidronate, pancuronium, papaverine, penicillin G, pentazocine, phentolamine, phenylephrine, phytonadione, potassium acetate, potassium chloride, procainamide, promethazine, propofol, propranolol, protamine, pyridoxime, quinupristin/dalfopristin, ranitidine, remifentanil, rituximab, rocuronium, sargramostim, sodium acetate, succinylcholine, sufentanil, tacrolimus, teniposide, theophylline, thiamine, thiotepa, ticarcillin/clavulanate, tigecycline, tirofiban, tobramycin, tolazoline, topotecan, trastuzumab, vancomycin, vasopressin, vecuronium, verapamil, vinblastine, vincristine, vinorelbine, vitamin B complex with C, zoledronic acid.
- **Y-Site Incompatibility:** acyclovir, aldesleukin, allopurinol, amifostine, aminophylline, amphotericin B cholesteryl, amphotericin B colloidal, amphotericin B lipid complex, amphotericin B liposome, ampicillin, ampicillin/sulbactam, azathioprine, aztreonam, bivalirudin, calcium chloride, cefazolin, cefepime, cefoperazone, cefotaxime, cefotetan, cefoxitin, ceftazidime, ceftriaxone, cefuroxime, chloramphenicol, clindamycin, dantrolene, dexamethasone, diltiazem, diazoxide, epoetin alfa, ertapenem, etoposide phosphate, fenoldopam, filgrastim, fludarabine, fluorouracil, folic acid, foscarnet, furosemide, ganciclovir, gemcitabine, imipenem/cilastatin, indomethacin, insulin, ketorolac, levofloxacin, midazolam, nitroprusside, pantoprazole, pemetrexed, pentamidine, pentobarbital, phenobarbital, phenytoin, piperacillin/tazobactam, sodium bicarbonate, streptokinase, trimethoprim/sulfamethoxazole.

Patient/Family Teaching

- Instruct patient to take medication as directed, not to skip doses or double up on missed doses. Take missed doses as soon as remembered unless almost time for next dose. If more than 2 doses are scheduled each day, missed dose should be taken within about 1 hr of the ordered time. Abrupt withdrawal may lead to gastritis, nausea, vomiting, dizziness, headache, tachycardia, and insomnia.
- Inform patient of possibility of extrapyramidal symptoms and tardive dyskinesia. Instruct patient to report these symptoms immediately to health care professional.
- Advise patient to change positions slowly to minimize orthostatic hypotension.
- May cause drowsiness. Caution patient to avoid driving or other activities requiring alertness until response to medication is known.

- Caution patient to avoid alcohol and CNS depressants. Advise patient to notify health care professional of all Rx or OTC medications, vitamins, or herbal products being taken and to consult with health care professional before taking other medications and alcohol.
- Advise patient to use sunscreen and protective clothing when exposed to the sun to prevent photosensitivity reactions. Extremes in temperature should also be avoided, because this drug impairs body temperature regulation.
- Instruct patient to use frequent mouth rinses, good oral hygiene, and sugarless gum or candy to minimize dry mouth. Consult health care professional if dry mouth continues for >2 wk.
- Advise patient not to take prochlorperazine within 2 hr of antacids or antidiarrheal medication.
- Advise patient that increasing bulk and fluids in the diet and exercise may help minimize the constipating effects of this medication.
- Inform patient that this medication may turn urine pink to reddish-brown.
- Advise patient to notify health care professional of medication regimen before treatment or surgery.
- **Instruct patient to notify health care professional promptly if sore throat, fever, unusual bleeding or bruising, skin rashes, weakness, tremors, visual disturbances, dark-colored urine, or clay-colored stools are noted.**
- Advise female patients to notify health care professional if pregnancy is planned or suspected or if breast feeding.
- Emphasize the importance of routine follow-up exams to monitor response to medication and detect side effects. Periodic ocular exams are indicated. Encourage continued participation in psychotherapy as ordered by health care professional.

Evaluation/Desired Outcomes

- Relief of nausea and vomiting.
- Decrease in excitable, paranoic, or withdrawn behavior when used as an antipsychotic.
- Decrease in feelings of anxiety.

Why was this drug prescribed for your patient?