1
diphenhydramINE (oral, parenteral)
(dye-fen-hye-dra-meen)
Aller-Aide, Allerdryl, Allergy Formula, AllerMax, Allernix, Banophen,
Benadryl (oral, skin-cream, Benadryl [oral, Benadryl], Banex, Chlor-5,
Compound, Compur Nighttime Sleep Aid, Crefra, Cresol-4F, Dihydrom Couph, 
Dihydromet, Delsym, Gemini, 40 Einkels, Heaven's Help, 
Histocot, Maximum Strength Nylac, Maximum Strength Sleepaid, Medal 
PM, Miles Nerva, Medly, Nighttime Sleep Aid [oral, Medal, Scovan Tussa, Allergy, DM, 
Nadyl, Sleep-Eze], Sleepaid, 5, Sleepaid II 2-night, Sleep... (cont'd), Sominex Fast, Siemens, 
Tusstat, Twilite, Union Nighttime Sleep aid

Classification
Therapeutic: allergy, cold, and cough remedies, antihistamines, antitussives
Pregnancy Category B

Indications
Relief of allergic symptoms caused by histamine release including: Anaphylaxis, Sea-
sonal and perennial allergic rhinitis, Allergic dermatoses. Parkinson's disease and 
dystonic reactions from medications. Mild nighttime sedation. Prevention of motion 
sickness. Antitussive (syrup only).

Action
Antagonizes the effects of histamine at H1-receptor sites; does not bind to or inactivate 
histamine. Significant CNS depressant and anticholinergic properties.

Therapeutic
Effects:
Decreased symptoms of histamine excess (sneezing, rhinorrhea, nasal and 
ocular pruritus, ocular tearing and redness, urticaria). Relief of acute dystonic reac-

Pharmacokinetics
Absorption: Well absorbed after oral or IM administration but 40–60% of an oral 
dose reaches systemic circulation due to first-pass metabolism.
Distribution: Widely distributed. Crosses the placenta, enters breast milk.
Metabolism and Excretion: 95% metabolized by the liver.
Half-life: 2–4 hr

Contraindications/Precautions
Contraindicated in:
Hypersensitivity; Acute attacks of asthma; Known alcohol intolerance (some liquid products).

Use Cautiously in:
Severe liver disease; Angle-closure glaucoma; Seizure disorders; Prostatic hyperplasia; 
Iatrogenic causes; May cause paradoxical excitement in young children. Hypersensitivity reactions: Use with caution.

Adverse Reactions/Side Effects
CNS: drowsiness, dizziness, headache, paradoxical excitation (increased in chil-
Local: pain at IM site.

Interactions
Drug-Drug: Increased risk of CNS depression with other antihistamines, alcohol, 
opioid analgesics, and sedative/hypnotics. Antihistamines effects with tri-
cyclic antidepressants, pimozide, or disopyramide. MAO inhibitors intensify and prolong the anticholinergic effects of antihistamines.

Drug-Natural Products: Concomitant use of kava-kava, valerian, or chamoe-
smile can cause CNS depression.

Route/Dosage
PO (Adults and Children 12 yr): Antihistaminic/antiemetic/antiemetic—25–50 mg q 4–6 hr, not to exceed 300 mg/day. Antitussive—25 mg q 4 hr as needed, not to exceed 150 mg/day. Sedative/hypnotic—25–50 mg q 4 hr (not to exceed 400 mg/day). Additive hypnotics—50 mg 20–30 min before bedtime.

TIME/ACTION PROFILE (antihistaminic effects)
ROUTE ONSET PEAK DURATION
PO 15–60 min 2–4 hr 4–8 hr
IM 20–30 min 2–4 hr 4–8 hr
IV rapid unknown 4–8 hr
PO (Children 6–12 yr): Antihistaminic/antiemetic/antivertiginic—12.5–25 mg q 4–6 hr (not to exceed 150 mg/day). Antidyskinetic—1–1.5 mg/kg q 6–8 hr as needed (not to exceed 300 mg/day). Antitussive—0.25 mg/kg q 4 hr (not to exceed 75 mg/day). Sedative/hypnotic—1 mg/kg/dose 20–30 min before bedtime (not to exceed 50 mg).

PO (Children 2–6 yr): Antihistaminic/antiemetic/antivertiginic—6.25–12.5 mg q 4–6 hr (not to exceed 37.5 mg/day). Antidyskinetic—1–1.5 mg/kg q 4–6 hr as needed (not to exceed 300 mg/day). Antitussive—0.125 mg/kg q 4 hr (not to exceed 37.5 mg/day). Sedative/hypnotic—0.5 mg/kg/dose 20–30 min before bedtime (not to exceed 25 mg).

IM, IV (Adults): 25–50 mg q 4 hr as needed (may not exceed 150 mg/day).

IM, IV (Children): 1.25 mg/kg (37.5 mg/m²) 4 times daily (not to exceed 300 mg/day).

Topical (Adults and Children ≥ 2 yr): Apply to affected area up to 3–4 times daily.

NURSING IMPLICATIONS

Assessment

- Diphenhydramine has multiple uses. Determine why the medication was ordered and assess symptoms that apply to the individual patient. 

- Prevention and Treatment of Anaphylaxis: Assess for urticaria and for patency of airway.

- Allergic Rhinitis: Assess degree of nasal stuffiness, rhinorrhea, and sneezing.

- Parkinsonism and Extrapyramidal Reactions: Assess movement disorder before and after administration.

- Insomnia: Assess sleep patterns.

- Motion Sickness: Assess nausea, vomiting, bowel sounds, and abdominal pain.

- Cough Suppression: Assess frequency and nature of cough, lung sounds, and amount and type of sputum produced. Administer multidose container as needed; do not exceed 100 mg/day.

- Pruritus: Assess degree of itching, skin rash, and inflammation.

- Lab Test Considerations: May cause skin response to allergy tests. Discontinue 4 days before skin testing.

- Potential Nursing Diagnoses

- Insomnia (Indications)

- Risk for deficient fluid volume (Indications)

- Risk for injury (Side Effects)

Implementation

- Do not confuse with benazepril.

- When used for insomnia, administer 20 min before bedtime and schedule activities to minimize interruption of sleep.

- When used for prophylaxis of motion sickness, administer at least 30 min and preferably 1–2 hr before exposure to conditions that may precipitate motion sickness.

- PO: Administer with meals or milk to minimize GI irritation. Capsule may be emptied and contents taken with water or food.

- Topically: Apply in affected area up to 3–4 times daily.

- IV Administration

- Direct IV: Diluent: May be further diluted in 0.9% NaCl, 0.45% NaCl, D5W, D10W, dextrose/saline combinations, Ringer's solution, LR, and dextrose/Ringer's combinations. Concentration: 25 mg/mL. Rate: Infuse at a rate not to exceed 25 mg/min.

- Y-Site Compatibility: acetaminophen, aldesleukin, alisplatin, alprostadil, amifostine, amikacin, aminocaproic acid, amphotericin B liposome, amphotericin B liposome, amsacrine, anidulafungin, argatroban, ascorbic acid, atropine, azithromycin, benztropine, bivalirudin, bleomycin, bumetanide, buprenorphine, butorphanol, calcium chloride, calcium gluconate, carboplatin, carmustine, caspofungin, ceftaroline, chlorpromazine, ciprofloxacin, cisatracurium, cisplatin, cladribine, clenbuterol, cytarabine, cyclophosphamide, cyclosporine, crizotinib, dactinomycin, dactyloscopy, dapsone, dexamethasone, dexamethasone, dextran, diphosphonate, disulfiram, doxycycline, duralumin, duretide, edelfosine, efavirenz, enfuvirtide, etanercept, etoposide, everolimus, etoposide phosphate, exemestane, extracellular matrix protein, famotidine, fenta

- IV Administration

- Direct IV: Diluent: May be further diluted in 0.9% NaCl, 0.45% NaCl, D5W, D10W, dextrose/saline combinations, Ringer's solution, LR, and dextrose/Ringer's combinations. Concentration: 25 mg/mL. Rate: Infuse at a rate not to exceed 25 mg/min.

- Y-Site Compatibility: acetaminophen, aldesleukin, alisplatin, alprostadil, amifostine, amikacin, aminocaproic acid, amphotericin B liposome, amphotericin B liposome, amsacrine, anidulafungin, argatroban, ascorbic acid, atropine, azithromycin, benztropine, bivalirudin, bleomycin, bumetanide, buprenorphine, butorphanol, calcium chloride, calcium gluconate, carboplatin, carmustine, caspofungin, ceftaroline, chlorpromazine, ciprofloxacin, cisatracurium, cisplatin, cladribine, clenbuterol, cytarabine, cyclophosphamide, cyclosporine, crizotinib, dactinomycin, dactyloscopy, dapsone, dexamethasone, dexamethasone, dextran, diphosphonate, disulfiram, doxycycline, duralumin, duretide, edelfosine, efavirenz, enfuvirtide, etanercept, etoposide, etoposide phosphate, exemestane, extracellular matrix protein, famotidine, fenta

- IV Administration

- Direct IV: Diluent: May be further diluted in 0.9% NaCl, 0.45% NaCl, D5W, D10W, dextrose/saline combinations, Ringer's solution, LR, and dextrose/Ringer's combinations. Concentration: 25 mg/mL. Rate: Infuse at a rate not to exceed 25 mg/min.

- Y-Site Compatibility: acetaminophen, aldesleukin, alisplatin, alprostadil, amifostine, amikacin, aminocaproic acid, amphotericin B liposome, amphotericin B liposome, amsacrine, anidulafungin, argatroban, ascorbic acid, atropine, azithromycin, benztropine, bivalirudin, bleomycin, bumetanide, buprenorphine, butorphanol, calcium chloride, calcium gluconate, carboplatin, carmustine, caspofungin, ceftaroline, chlorpromazine, ciprofloxacin, cisatracurium, cisplatin, cladribine, clenbuterol, cytarabine, cyclophosphamide, cyclosporine, crizotinib, dactinomycin, dactyloscopy, dapsone, dexamethasone, dexamethasone, dextran, diphosphonate, disulfiram, doxycycline, duralumin, duretide, edelfosine, efavirenz, enfuvirtide, etanercept, etoposide, etoposide phosphate, exemestane, extracellular matrix protein, famotidine, fenta
diphenhydramine, doxorubicin, doxycycline, ephedrine, epinephrine, epirubicin, esmolol, etoposide, etoposide phosphate, famotidine, fenoldopam, fentanyl, filgrastim, fluconazole, fludarabine, folic acid, gemcitabine, gentamicin, glycopyrrolate, granisetron, hydromorphone, idarubicin, ifosfamide, imipenem/cilastatin, irinotecan, isoproterenol, ketamine, labetalol, leucovorin calcium, levorphanol, lidocaine, linezolid, lorazepam, magnesium sulfate, mannitol, methadone, methotrexate, metaraminol, methyldopate, metoclopramide, metoprolol, metronidazole, midazolam, mitomycin, mitoxantrone, morphine, moxifloxacin, multiple vitamins, mycophenolate, nalbuphine, naloxone, nicardipine, nitroglycerin, norepinephrine, octreotide, paclitaxel, palonosetron, pamidronate, papaverine, pemetrexed, penicillin G, pentamidine, pentazocine, phenylephrine, phytonadione, piperacillin/tazobactam, potassium acetate, potassium chloride, procainamide, prochlorperazine, promethazine, propofol, propranolol, protamine, quinupristin/dalfopristin, ranitidine, remifentanil, rituximab, rocuronium, sargramostim, sodium acetate, streptokinase, succinylcholine, sufentanil, tacrolimus, teniposide, theophylline, thiamine, thiorepoma, ticarcillin/clavulanate, tigecycline, tirofiban, tobramycin, tolazoline, trastuzumab, vancomycin, vasopressin, vecuronium, verapamil, vinblastine, vincristine, vinorelbine, vitamin B complex with C, voriconazole, zoledronic acid.

● Y-Site Incompatibility: allopurinol, aminophylline, amphotericin B cholesteryl complex, amphotericin B colloidal, ampicillin, azathioprine, cefazolin, cefepime, ceftazidime, ceftriaxone, cefuroxime, chloramphenicol, dantrolene, dexamethasone, diazepam, diazoxide, fluorouracil, fosarnet, furosemide, ganciclovir, indomethacin, insulin, ketorolac, methylprednisolone, milrinone, vincristine, zidovudine.

● Topical: Apply a thin coat and rub gently until absorbed. Only for topical use; avoid ingestion.

Patient/Family Teaching

● Instruct patient to take medication as directed; do not exceed recommended amount. Caution patient not to use oral OTC diphenhydramine products with any other product containing diphenhydramine, including products used topically.

● May cause drowsiness. Caution patient to avoid driving or other activities requiring alertness until response to drug is known.

● May cause dry mouth. Instruct patient to frequent oral rinses, avoid spicy foods, consume adequate fluids, and use sugarless gum or candy to minimize this effect. Notify health care professional if dry mouth persists for more than 2 wk.

● Teach sleep hygiene techniques (dark room, quiet, bedtime ritual, limiting daytime napping, avoidance of alcohol and caffeine) to patients taking diphenhydramine to aid sleep.

● Advise patient to use sunscreen and protective clothing to prevent photosensitivity reactions.

● Caution patient to avoid use of alcohol and other CNS depressants concurrently with this medication.

● Use: Can cause excitation in children. Caution parents or caregivers about proper dose calculation; overdose, especially in infants and children, can cause hallucinations, seizures, or death. Caution parents to avoid OTC cough and cold products while breast feeding or to children <4 yr.

● Geri: Instruct older adults to avoid OTC products that contain diphenhydramine due to increased sensitivity to anticholinergic effects and potential for adverse reactions related to these effects.

● Advise patients taking diphenhydramine in OTC preparations to notify health care professional if symptoms worsen or persist for more than 7 days.

Evaluation/Desired Outcomes

● Prevention of, or decreased urticaria in, anaphylaxis or other allergic reactions.

● Decreased dyskinesia in parkinsonism and extrapyramidal reactions.

● Sedation when used as a sedative/hypnotic.

● Prevention of or decrease in nausea and vomiting caused by motion sickness.

● Decrease in frequency and intensity of cough without eliminating cough reflex.

Why was this drug prescribed for your patient?