Wilderness
Prehospital Emergency Medicine
Drug Information

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This work represents a compilation of information about various drugs that may be included in a Wilderness Medical Kit. The intent of this document is to provide a brief (copy it onto 100% cotton paper and keep it in your back pack) yet sufficient amount of information about the drugs listed to allow a Wilderness EMT (under the supervision of a physician or veterinarian) to make an informed decision about the use of these medications in a clinical setting (i.e. before giving them to a patient). The information has been compiled from various sources (see References) and through information used by clinical practitioners. Efforts have been made to review this information and to keep it up to date with respect to currently accepted clinical practices (as of the date of this document). However, it is important to realize that notions of the clinical effectiveness, and usage of medications change with time as more information becomes available about them and their effects on the systems of the body. It is also important to note that the clinical effects of medications can be species dependent (what will cure one can kill another). It is the responsibility of every Wilderness EMT to contact a medical command physician or veterinarian (through regionally approved methods) before administering any medicine to any patient of any species. No information in this document should be considered a substitute for medical advice given by a physician or veterinarian. When in doubt, do no harm.

Pronunciation: Syllables that are stressed are followed by ('). The macron (á) indicates a long vowel, the breve(ã) a short vowel. Without a diacritical mark a vowel ending a syllable is long (ta‘bl), within a syllable is short (caţ).

Alternate dosage in braces '{}'.

Perscription drugs are marked by the symbol 'R' following the drug name.

When the word dose is used without qualification (e.g. Pediatric, Dog, Horse, Llama) the dose is assumed to be for an adult human. When no dose is given for a drug then that drug is contraindicated.

Nothing should be given by mouth to an unconscious patient.

A contraindication to any medication is patient hypersensivity to that medication. This is assumed for all of the following and will not be listed under the contraindications for any medicine.
Analgesics

NSAIDS can predispose to photo-toxic effects of the sun in sensitive individuals.

acetaminophen [Tylenol®]

acetaminophen [Tylenol®]
a•set’a•min'o•ten [ti’len•awl]

Availability: tablet: 325 mg acetaminophen (OTC)
Action: analgesic (↑ of pain threshold), antipyretic (resets hypothalamic heat-regulating center), ↑ sweating, dilation of blood vessels, not a platelet inhibitor, not anti-inflammatory
Indications: minor aches, pains, headaches, fever
Contraindications: liver disease, previous max therapeutic dose within 4 hrs.
Precautions: OD (> 10 g adult; > 140 mg/kg child) may cause hepatic toxicity. Early symptoms: N/V, diaphoresis, malaise. For pain do not take for more than 10 days (adult) 5 days (child). For fever do not take for more than 3 days.
Side Effects: allergic reactions, hypoglycemia, jaundice
Interactions: alcohol, anticoagulants, oral contraceptives, diflunisal, metoclopramide, chlopamphenicol
Dose: 325-1000 mg PO; q 4-6h, PRN
Pediatric Dose: 10-15 mg/kg PO; q 4h, PRN {(6-12 y) 160 mg PO; q.i.d., PRN}
Dog Dose: 25-30 mg/kg PO; q 6h, PRN

aspirin (acetylsalicylic acid) [Bufferin®] (buffered) [Ecotrin®] (enteric coated)

ás´për´in (ăs´ē’til¨säl¨i¨sil¨ĭk) []

Availability: tablet: 325 mg aspirin; adult chewable (children's) aspirin: 80 mg aspirin (OTC) in either buffered or enteric coated formulation
Action: inhibits prostaglandin synthesis of platelets, analgesic, antipyretic, anti-inflammatory
Indications: minor aches, pains, headaches, fever, arthritis, MI (prophylaxis), sunburn (+2 hr before exposure), Disseminated Intravascular Coagulation (DIC)
Contraindications: children < 6 y c chicken pox or flu symptoms (Reye syndrome), last trimester of pregnancy, allergy to aspirin, asthma, gastric ulcers, suspected bleeding, renal insufficiency
Precautions: not c prescription drugs (NSAIDs) for: arthritis, anticoagulants, gout (OK unless on other NSAIDS), diabetes (renal insufficiency)
Side Effects: gastritis(5%), heartburn(12%), N/V (8%), tinnitus and hyperthermia (signs of OD), ↑BP
Interactions: potentiates other analgesics (NSAIDs), anticoagulants, antacids may ↑ clearance
Dose: antiplatelet (low): 80-325 mg SL, PO; q 24 hr, PRN
analgesic, antipyretic (intermediate): 325-650 mg PO; q 4 hr, PRN
anti-inflammatory (high): 4-8 g/day
Pediatric Dose: (6-12 y) 160 mg PO; q.i.d., PRN
Dog Dose: antiplatelet: 0.5 mg/kg PO; b.i.d., PRN; analgesic: 10-20 mg/kg PO q 12 h, PRN
antipyretic: 10 mg/kg PO; b.i.d., PRN; DIC: 150-300 mg/20kg PO q 24-48 h for 10 days
anti-inflammatory: 40 mg/kg PO; q 18 h, PRN {25-35 mg/kg PO; q 8 h}
Horse Dose: analgesic: 25 mg/kg PO q 12 h (one time), then 10 mg/kg PO q 24h
ibuprofen [Advil®, Nuprin®, Motrin®]

i•bu’pro•fen [ad’vil]

Availability: tablet: 200 mg ibuprofen (OTC), 400, 600, 800 mg ibuprofen (Rx)

Action: inhibit PG synthesis of platelets, analgesic, antipyretic, anti-inflammatory

Indications: minor to moderate aches, pains, headaches, fever, primary dysmenorrhea, pain following dental extraction, arthritis, sunburn

Contraindications: pregnancy, allergy to aspirin, gastric ulcers, bleeding, diabetes, renal insufficiency

Precautions: not prescription NSAIDs, blurred/diminished vision, scotomata (blind spot), changes in color vision, fluid retention, edema, aseptic meningitis, may promote asthma attack, For pain do not take for more than 10 days (adult) 5 days (child). For fever do not take for more than 3 days.

Side Effects: gastritis & antiplatelet (less compared to aspirin)

Interactions: potentiates other analgesics, anticoagulants

Dose: arthritis: 600 mg PO q.i.d., 800 mg PO t.i.d.

mild to moderate pain, dysmenorrhea: 400 mg PO; q 4 h, PRN

Pediatric Dose: (>12 y) 10 mg/kg PO; q 4-6 h, PRN

Note: Cannot be used on the dog because it causes repeated and consistent vomiting even with used in enteric-coated formulations.

ketorolac tromethamine [Toradol® Rx]

trö•meth’a•men [to rah•dol]

Availability: injection: 60 mg in 2 ml of NaCl (also 10% w/v alcohol)

Action: inhibit PG synthesis of platelets, analgesic, antipyretic, anti-inflammatory

Indications: major pain (short term management), pain following trauma

Contraindications: pregnancy, labor and delivery, diabetes, renal insufficiency, GI bleed, EtoH-ism

Precautions: other NSAIDs, may promote asthma attack, do not use for > 7 days

Side Effects: may prolong bleeding time, edema (3-9%), nausea (12%), GI disorder (13%), diarrhea (3-9%), drowsiness (3-8%), dizziness (3-8%), H/A (17%), diaphoresis (3%), constipation (3%), dyspepsia (12%), insomnia (14%), nervousness (6%), pruritis (3-9%), dry mouth (9%)

Interactions: aspirin (less protein binding, use lower dose)

Dose: (lower end dose for pt < 50 kg, > 65 y, renal function)

30-60 mg IM initially, then 15-30 mg IM, IV; q 6h, PRN

acetaminophen codeine phosphate [Tylenol #3® Rx]

ä•set’a•min’ō•fen co’dën fös’fat [ti’len•awl]

Availability: tablet: 30 mg codeine phosphate, & 300 mg acetaminophen

Action: peripherally (acetaminophen), with centrally (codeine) acting analgesic, antitussive (codeine)

Indications: moderate to moderately severe pain

Contraindications: hypersensitivity to components (including sulfite sensitivity)
Precautions: c head injuries, c acute abdominal conditions, c hepatic & renal function, c asthma (sulfite sensitivity)
Side Effects: ICP, LOC, respirations, N/V, SOB, dizziness, light-headedness, constipation
Interactions: potentates other narcotics, MAO inhibitors, tricyclic antidepressants, alcohol, 
scopolamine HCl (paralytic ileus)
Dose: 15-60 (360 max in 24h) mg codeine; 300-1000 (4000 max in 24h) mg acetaminophen; q 4h; PRN

acetaminophen c hydrocodone bitartrate [Vicodin®, Lortabs®, Anexia®]
hí’dró•kô’dôn [vi’kô•din]
Availability: tablet: 500 mg acetaminophen, & 5 mg hydrocodone bitartrate
Action: hydrocodone: opioid analgesic, antitussive; acetaminophen: analgesic, antipyretic
Indications: moderate to moderately severe pain, canine upper respiratory infection (kennel cough)
Contraindications: hypersensitivity to components
Precautions: c head injuries, c acute abdominal conditions (???), c hepatic & renal function
Side Effects: allergic reaction to sulfite, ICP, LOC, respirations, N/V, light headedness, less constipating and more sedating than codeine, dries respiratory mucosa
Interactions: potentates other narcotics, alcohol, atropine (paralytic ileus), scopolamine HCl (paralytic ileus)
Dose: 1-3 tablets PO q 4-6h, PRN
Dog Dose: 1 tablet/22 kg PO q 6-12h, PRN (0.22 mg/kg hydrocodone PO b.i.d.-t.i.d.)

morphine sulfate B
mor’fén sul’fát
Availability: ampul or Tubex®/tubexe ((25 G x 1 ¼ “): 10 mg in 1 mL
Action: CNS, pain (max analgesic 60 min p admin ???), peripheral vasodilation
Indications: moderate to moderately severe pain, pulmonary edema
Contraindications: hypersensitivity, undignosed abdominal pain, respiratory insufficiency or depression, CNS depression, bronchial asthma attack, head injury, intracranial pressure, hypovolemia
Precautions: hypotension, respirations (have naloxone available)
Side Effects: LOC, itching, N/V (Tx c antihistamines), urinary retention ( 90%), constipation (drink fluids), drowsiness (titrate dosage to tolerable pain level), myosis
Side Effects Dog: CNS, emetic, antitussive, myosis, may cause hypothermia, initially stimulates respirations, causes coronary vasoconstriction, will immediately defecate following injection
Side Effects Horse: CNS, may cause hyperthermia, may cause mild colic
Interactions: not c MAO inhibitors, potentated by alkalizing agents, antihistamines, alcohol, and other narcotics, antagonized by acidifying agents
Dose: IV: 2-5 mg, then 2 mg q few min until p pain or respiratory depression (max 10-30 mg in 4 h)
IM: 5-15 mg based on pt weight
Pediatric Dose: 0.1-0.2 mg/kg IV
Dog Dose: analgesia: 0.5-1.0 mg/kg IV, IM, SQ; PRN
Horse Dose: analgesia: 0.22 mg/kg IM, slow IV; PRN

naloxone hydrochloride [Narcan® B]
nal•oks′ön
Availability: ampul or prefilled syringe: 2.0 ml of 1.0 mg/ml
Action: opioid antagonist, reverses effects of narcotics short term
Indications: narcotic or synthetic analgesic OD, rule out narcotic in coma of unknown origin
Contraindications: hypersensitivity
Precautions: caution ᶑ narcotic dependency (cause withdrawal effects), short acting
Side Effects: incidence low
Dose: 1-2 mg IV, IM, ET
Pediatric Dose: 0.01-0.1 mg/kg IV, IM, ET
Dog Dose: 0.02-0.04 mg/kg IV, IM, & SQ
Horse Dose: 0.01-0.02 mg/kg IV

phenazopyridine hydrochloride [Pyridium® B]
fēn′ā•zo•per′i•dēn hi•dro•klo′rid [py′ri′di•üm]
Availability: tablet: 100 mg phenazopyridine hydrochloride
Action: urinary tract analgesic
Indications: pain, burning, urgency, frequency arising from irritation of the lower UT caused by infection, trauma, passage of catheters
Contraindications: hypersensitivity to drug, renal insufficiency
Precautions: do not use for more than 2 days while treating UTI ᵑ antibacterials, discontinue ᵑ jaundice
Side Effects: red or orange coloured urine, H/A, rash, itching, GI disturbance
Dose: 200 mg t.i.d. p.c.

oil of cloves [Eugenol®]
[u′jen•əl]
Availability: 10 mL bottle (OTC)
Action: short acting topical dental analgesic
Indications: tooth ache
Precautions: temporary measure only
Dose: apply to effected tooth PRN

Tranquilizers

haloperidol [Haldol® B]
hā′lo•per′i•dōl [hal′dawl]
Availability: ampul or prefilled syringe: 1.0 mL of 5.0 mg/mL, tablet: 5 mg
Action: tranquilizer (mechanism unknown)
Indications: psychotic disorders (e.g. schizophrenia), behavioral problems (e.g. hyperexcitability especially in children), Tourette's Disorder
Contraindications: hypersensitivity, toxic CNS depression or comatose states, Parkinson's disease
Precautions: CV disorders (could cause hypotension of angina), anticonvulsive therapy (convulsive threshold)
Side Effects: Tardive Dyskinesia, extrapyramidal symptoms, hypotension
Interactions: CNS potentlytated by EtOH, other analgesics, and narcotics, may block vasopressor action of epinephrine, interocular pressure atropine, scopolamine
Dose: 2-5 mg q 4-8 h IM, 0.5-5.0 mg b.i.d. or t.i.d. PO, 5 mg q 20-30 min until effect achieved
Pediatric Dose: (3-12 y, 15-40 kg) 0.05-0.15 mg/kg/day b.i.d. or t.i.d. PO

**diphenhydramine hydrochloride [Benadryl 25°]**
(see Antihistamines)

**Muscle relaxants**

**cyclobenzaprine hydrochloride [Flexeril® BJ]**
siˈklōbənˈziːprən hīˈdrōklorˈɪd [flek]
Availability: tablet: 10 mg cyclobenzaprine hydrochloride
Action: acts within CNS at brain stem (as opposed to spinal cord levels), highly protein bound, excreted by kidneys
Indications: skeletal muscle spasm (hyperactivity)
Contraindications: hypersensitivity, hyperthyroidism, concomitant MAO (monoamine oxidase) inhibitors use, or within 14 days after discontinuation, acute recovery phase of MI, arrhythmias, heart blocks, conductance disturbances, CHF
Precautions: not effective for muscle spasms associated cerebral or spinal cord disease, or children cerebral palsy, avoid EtOH
Side Effects: chronotrope (atropine like), dry mouth (7-27%), blurred vision (1-3%), drowsiness (16-39%), dizziness (3-11%), constipation (1-3%), fatigue (1-3%), H/A (1-3%), N/V (1-3%), nervousness (1-3%)
Interactions: MAO inhibitors, enhances effects of alcohol, opioids (codine, hydrocodone, morphine), haloperidol, barbiturates, and other CNS depressants
Dose: 10 mg PO t.i.d. (use only for short periods, 2-3 weeks)

**Antihistamines**

Virtually all H1 blockers have the same indications. Diphenhydramine is usually used for: bee stings, poison ivy, hypersensitivess, anaphylaxis, and seasonal allergies. Others are generally used for seasonal allergies.

**diphenhydramine hydrochloride [Benadryl 25°]**
diˈfɛnˈhīˈdramīn hīˈdrōklorˈɪd [bɛˈnɑˈdril]
Availability: tablet: 25 mg diphenhydramine hydrochloride (OTC) ampul: 50 mg/mL in 1 mL vial
Action: antihistamine (blocks H1 receptors), sedation
Indications: anaphylaxis //anˈah•fi•lakˈsis//, allergies (rhinitis \ri•nˈtı•zı\, sneezing, tearing, hives, itching), dystonic reactions due to phenothiazines //feˈno•thiˈah•zıdz//, motion sickness (antiemetic in small animals), sedation
Contraindications: asthma, glaucoma, COPD (if problems c mucosal secretions), SOB, enlarged prostate, nursing mothers, caution c hypertension
Side Effects: dries bronchial secretions, palpitations, excitability in children, antitussive
Interactions: c hypnotics, sedatives, tranquilizers, EtOH to ↑sedation, potentates effects of other antihistamines
Dose: allergies: 25-50 mg q 4-6h PO, IM, IV
sedation: 25-50 mg q 4h PO (losses sedative effect after 3-4 days) (elderly or enfeebled patients initial dose of ½ minimal dose is often effective)
Pediatric Dose: († 20 lb) 12.5-25 mg 6-8h PO (max: 300 mg/day) {5 mg/kg/day}
Dog Dose: motion sickness & antiemetic: 2-4 mg/kg PO q 8 h
urticaria & angioedema: 2 mg/kg IM PRN (c prednisone 2 mg/kg IM bid & epinephrine 0.05-0.2 mg SQ)
itching: 25-50 mg PO b.i.d.-t.i.d., distonic reactions: 2-5 mg/kg IV

chlorpheniramine maleate [Chlor-Trimeton®]
klor´fenir´ä•mên [klor•tri•më•ton]
Availability: tablet: 4 mg chlorpheniramine maleate
Action: antihistamine (blocks H₁ receptors)
Indications: allergies (rhinitis, sneezing, tearing)
Contraindications: asthma, glaucoma, COPD (if problems c mucosal secretions), SOB, enlarged prostate, nursing mothers, caution c hypertension
Side Effects: anticholinergic (dry mouth, urinary retention), sedation, drowsiness, excitability in children
Interactions: potentates effects of other antihistamines and depressant effects narcotics, not c EtOH
Dose: 4 mg q 4-6h PO
Pediatric Dose: (6-11 y) 2 mg q 4-6h PO
Dog Dose: 4-8 mg q 12h IV, IM, SC, PO (max: 0.5 mg/kg q 24h)

chlorpheniramine maleate [Chlor-Trimeton® REPETABS®]
Availability: tablet: 12 mg chlorpheniramine maleate (timed released formulation)
Dose: (> 12y) 1 q 8-12h PO (do not exceed III tablets in 24h)

terfenadine [Seldane®]
[sël’dàn]
Availability: tablet: 60 mg terfenadine
Action: antihistamine (blocks H₁ receptors; onset of action 1-2h)
Indications: allergic reactions
Contraindications: pregnancy, nursing women, not c metronidazole (ketoconazol ?) and erythromycin (QT prolongation, ventricular arrhythmias, death)
Precautions: store away from heat and direct sunlight
Side Effects: anticholinergic (drying), ventricular arrhythmias (torsade de pointes) in OD
Interactions: potentates effects of other antihistamines
Dose: 60 mg b.i.d. PO  
Pediatric Dose: (> 12y) 60 mg b.i.d. PO  
Dog Dose: 4.5-10 mg/kg q 12h PO

**astemizole [Hismanal® R]**

[his’ma•nal]  
Availability: tablet: 10 mg astemizole  
Action: antihistamine (blocks peripheral H₁ receptors), non-sedating (does not cross blood-brain barrier)  
Indications: seasonal allergic rhinitis  
Contraindications: known hypersensitivity to drug, pregnancy, not c ketoconazol or erythromycin  
Precautions: anticholinergic effects c lower airway diseases (asthma), renal impairment, store away from heat and direct sunlight  
Side Effects: CNS, GI, anticolinergic  
Interactions: potentates effects of other antihistamines  
Dose: 10 mg q 24h PO a.c., or +2h p.c., no aditional intake +1h after dosing  
Pediatric Dose: (> 12y) same as Adult  
Dog Dose: 0.2 mg/kg q 24h PO

**Motion Sickness**

**meclizine hydrochloride [Bonine®, Antivert® R]**

[mēk’li•zīn hī’drō•klor•īd [bō’nen]]  
Availability: tablet: 25 mg meclizine hydrochloride  
Action: antihistamine (blocks vasopressor response to histamine)  
Indications: N/V, & dizziness c motion sickness  
Contraindications: asthma, glaucoma, emphysema, COPD, SOB, dyspnea, children < 12y, pregnant or nursing women  
Precautions: do not drive or operate machinery  
Side Effects: may cause drowsiness (especially c alcohol, sedatives, & tranquilizers)  
Dose: 12.5-25-50 mg q 24h (administer 1h before embarkation)  
Pediatric Dose: (> 12y) 25-50 mg q 24h (administer 1h before embarkation)  
Dog Dose: 25 mg q 24h PO (motion sickness: administer 1h before embarkation)

**dimenhydrinate [Dramamine®, Gravol® (Canada)]**

dī’men•hī’drən•ät [drām’ə•mēn]  
Availability: tablet: 50 mg dimenhydrinate, ampul: 50 mg in 1 mL  
Action: depressant effect on hyperstimulated labryinthine (internal ear) function  
Indications: Tx & prevention of N/V, vertigo, & motion sickness  
Contraindications: asthma, glaucoma, emphysema, COPD, SOB, dysuria (enlarged prostate), dyspnea, children < 2y  
Precautions: do not drive or operate machinery  
Side Effects: may cause drowsiness (especially c alcohol, sedatives, & tranquilizers)
Interactions: antihistamines

Dose: 50-100 mg q 4-6h (max: 400 mg/day)

Pediatric Dose: (6-12y) 25-50 mg q 6-8h (max: 150 mg/day); (2-6y) 25 mg q 6-8h (max: 75 mg/day)

Dog Dose: 4-8 mg/kg q 8h IV, IM, PO

**scopolamine hydrochloride (patch) [Transderm Scop® RJ**

skō*pōl’ä*mēn hī*drō*klo’rīd [trāns*derm scōp]

Availability: patch (circular flat disk): 1.5 mg scopolamine

Action:

Indications: to prevent N/V of motion sickness for 3 days

Contraindications: glaucoma, children, elderly, pregnant or nursing women

Precautions: c metabolic, liver, kidney diseases, urinary, stomach, or intestinal obstructions, drug withdrawal symptoms if used > 3 days, limit contact c water, do not reapply a disk once in use, wash hands after application

Side Effects: dryness of mouth (66%), drowsiness (17%), mydriatic if applied to eye, phychosis

Interactions: codine & hydrocodone (paralytic ileus)

Dose: i disc to dry area of skin behind ear (4h before needed) for 3 days

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**Decongestants**

**pseudoephedrine hydrochloride [Sudafed®]**

sū’dō*ep’ī nef’rin hī*drō*klo’rīd [sū’duh*fēd]

Availability: tablet: 30 mg pseudoephedrine hydrochloride (OTC)

liquid: 30 mg in 5 mL (1 tsp) pseudoephedrine hydrochloride (OTC)

Action: promotes nasal drainage

Indications: for relief of nasal congestion due to upper respiratory infection or allergy

Contraindications: caution c underlying heart disease, HTN, thyroid disease, diabetes, enlarged prostate gland

Side Effects: tachacardia, dizziness, nervousness, sleeplessness, HTN

Interactions: not c antihypertensive, antidepressant, or MAO inhibitors

Dose: 60 mg q 4-6h PO (max: 4 doses in 24h)

Pediatric Dose: (6-12 y) 30 mg q 4-6h PO; (2-6y use liquid) 15 mg q 4-6h PO

**pseudoephedrine hydrochloride [Sudafed®] 12 Hour**

Availability: tablet: 120 mg pseudoephedrine sulfate (OTC)

Dose: 1 tablet q 12h (same for pedi > 12 y)

**oxymetazoline hydrochloride [Afrin®]**

ok’sě•mē’tuh zō’lēn hī*drō*klo’rīd [a’frin]

Availability: nasal spray: 0.5 mg (0.05%) oxymetazoline hydrochloride per mL in 3 mL bottle

Action: sympathomimetic (constricts smaller arterioles of nasal passages)

Indications: for relief of nasal congestion c due to upper respiratory infection or allergy
**Precautions:** do not use product for more than 3 days, CAD and angina

**Dose:** 2-3 sprays c head upright q 12h

**Pediatric Dose:** (> 6y) 2-3 sprays c head upright q 12h

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**Steroids**

**prednisone R**

pred'ni•sön

**Availability:** tablet: 5, 10, 20 mg prednisone

**Action:** anti-inflammatory

**Indications:** emergency Tx of allergic reactions (anaphylaxis: urticaria & angioedema), asthma

**Contraindications:** systemic fungal infections

**Precautions:** use c shingles involving the eye can cause corneal ulceration, enhanced effect c hypothyroidism and cirrhosis, c coexisting ulcerative diseases, GI bleed

**Side Effects:** drug-induced secondary adrenocortical insufficiency (after 2 weeks), potential for psychic derangements aggravated by preexisting psychotic tendencies, ↑ blood sugar (glucosuria)

**Interactions:** potentates effects of other anti-inflammatory drugs

**Dose:** Loading: 40-60 mg/day; ↓ by 10mg/day after 3 days

**Dog Dose:** anti-inflammatory: 0.5-1 mg/kg 12-24h, then q 48h, IV, IM, PO

**Horse Dose:** 0.25-1.0 mg/kg b.i.d. IM, PO

**Llama Dose:** 0.5-1.0 mg/kg b.i.d. PO (gradually ↓ dosage to lowest effective dose given every other day)

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**dexamethasone [Decadron® R, Hexadrol® R, Azeum® R]**

dēkˈsa•methˈä•sön []

**Availability:** ampul: 10 mg/mL dexamethasone in 10 mL LR/NS (also 4 mg/mL in 1 mL)

**Class:** synthetic glucocorticoid // glooˈko•korˈti•koid// (steroid)

**Action:** anti-inflammatory, ↓ CE, ↓ immune response

**Indications:** cerebral edema, anaphylaxis (p epinephrine and diphenhydramine)

**Contraindications:** systemic fungal infections, hypersensitivity, febrile bacterial illness unless used c antibiotic, adrenal hyperactivity (cushings).

**Precautions:** 2-6 hr onset of action, protect from heat (15-30°C) & light

**Side Effects:** GI bleeding, prolonged wound healing

**Interactions:** potentates effects of other anti-inflammatory drugs

**Dose:** 4-24 mg (may need stress dose if pt on chronic steroids)

**Pediatric Dose:** 0.2-0.5 mg/kg

**Dog Dose:** Anti-inflammatory: 0.1-0.2 mg/kg q 12-24h IV, IM, PO; Shock: 4-6 mg/kg slow IV

**Horse Dose:** Anti-inflammatory: 2.5-5 mg IV, IM; Shock: 4-6 mg/kg IV

**Llama Dose:** Anaphylaxis: 2 mg/kg IV

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**hydrocortisone acetate c pramoxine HCL [Pramosone® R]**
DRAFT: 5 September 1994

hi´drö·kor´ti·son c präm·ök´sən [präm·ô·sôn]
Availability: tube: 1 oz hydrocortisone acetate 1% c pramoxine HCL 1%
Action: hydrocortisone (steroid: anti-inflammatory, anti-pruritic, vaso-constrictive), pramoxine (topical anesthetic)
Indications: inflammation, severe itching of skin
Contraindications: viral disease, circulatory impairment, hypersensitivity, do not use in eye
Precautions: c infection use appropriate antifungal or antibacterial agent, if favorable response does not occur promptly then discontinue, if occlusive dressings are used possibility exists for systemic absorption
Side Effects: ↓healing
Interactions: caution c systemic corticosteroids
Dose: apply to affected area t.i.d. or q.i.d.

triamcinolone acetonide [Kenalog 0.1%® B]
trí·ām·sin´ō·lōn] [Kenalog 0.1%® B]
Availability: tube: 1 mg triamcinolone acetonide/g of cream in 15g tube
Action: steroid: anti-inflammatory, anti-pruritic, vaso-constrictive
Indications: strong allergic reactions on the skin
Contraindications: hypersensitivity, do not apply to face, do not apply when fungal infection suspected
Precautions: occlusive dressings ↑the precutaneous absorption (children are more susceptible to systemic toxicity)
Side Effects: ↓healing of wounds, ↑bacterial and fungal growth
Interactions: caution c other systemic corticosteroids
Dose (All): apply to affected area b.i.d., t.i.d.

Gastrointestinal

calcium carbonate [Tums®]
käl´sē·ūm kär´bōn·at []
Availability: tables: 500 mg calcium carbonate
Action: antacid
Indications: hyperacidity, acid indigestion, heartburn, upset stomach
Contraindications: alkalosis
Precautions: do not administer within 1-2 h of tetracycline product dosing, administer slowly
Side Effects: alkalosis, constipation
Interactions: synergistic c other antacids
Dose: 0.5-1.0 g q 1h (max: 8 g/day)
Pediatric Dose: 1-4 g/day PO

petrolatum jelly [Vaseline®]
Availability: tubes: 1-2 oz petrolatum jelly
Action: laxative (lubricates fecal material & intestinal mucosa, reduces reabsorption of water by intestinal mucosa, ↑ fecal bulk & ↓ intestinal transit time)

Indications: constipation

Precautions: administer between meals so as not to interfere with fat soluble vitamin absorption.

Dog Dose: 2-60 ml PO

Note: In the horse mineral oil is administered through a stomach tube.

bismuth subsalicylate [Pepto-Bismol®]
biz‘mith sub’sal’i-sil’at [pēp’tō•bīs’mol]
Availability: tablet: 262 mg bismuth subsalicylate, Liquid: 130 mg bismuth subsalicylate per tablespoon

Action: exact mechanism unknown

Indications: diarrhea, heartburn, indigestion, nausea

Contraindications: hypersensitivity to salicylates, childern recovering from chicken pox or flu (vomiting is an early sign of Reye’s Syndrome), pregnant or nursing women

Precautions: contains salicylates, caution to anticoagulation, diabeties, & gout, diarrhea + fever

Side Effects: tinnitus (OD), temporary darkening of tongue and/or stool (green-black), constipation

Interactions: additive effect to other salicylates (e.g. aspirin), hydrocortisone, tetracyclines, cipro (may be inactivated or absorption ↓)

Dose: diarrhea prophylaxis: 1 tablet q.i.d. 
1 tablet ¼-1h PO (max: 8 doses in 24h)

Pediatric Dose: (9-12y) ½ tablet; (6-9y) 2/3 tablet; (3-6y) 1/3 tablet ½-1h PO (max: 8 doses in 24h);
(0-3y) contraindicated: can cause severe constipation and impaction

Dog Dose: diarrhea: 20-50 mg/kg/day (in divided doses) PO

Horse Dose: diarrhea: 70 mg/kg PO tid-qid

bisacodyl [Dulcolax®]
dul’ko•lax]
Availability: tablet: 5 mg bisacodyl

Action: contact laxative acting on colonic mucosa to produce normal peristalsis of the colon

Indications: acute constipation, constipation c pregnancy

Contraindications: acute surgical abdomen (unexplained abdominal pain, N/V)

Precautions: laxative dependence c frequent use

Interactions: do not take within 1 hr of antacids or milk

Dose: ii–iii tablets swallowed whole (at bedtime)

Pediatric Dose: (> 6 y) ½ tablet swallowed whole

Dog Dose: ½ tablet 8-24h PO

loperamine hydrochloride [Imodium® A-D]
Availability: capsule: 2 mg loperamine

Action: ↓ intestinal motility, & effects water and electrolyte movement through bowel

Indications: control and symptomatic relief of acute nonspecific diarrhea
Contraindications: hypersensitivity to drug, use for > 2 days, if accompanied by fever, blood in stool
Side Effects: may speed at which enteric microbes are evacuated (prolonging illness)
Dose: capsules, then capsule loose bowel movement (max: 4 capsules/day)
Pediatric Dose: 2-5y (24-47 lb): capsule loose bowel movement (max: ½ capsules/day)
6-8y (48-59 lb): capsule, then capsule loose bowel movement (max: 2 capsules/day)
9-11y (60-95 lb): capsule, then capsule loose bowel movement (max: 3 capsules/day)
Dog Dose: diarrhea: 0.1-0.2 mg/kg q 8-12h PO {capsule/25 kg body weight PO qid} (> 10 kg)

**prochlorperazine [Compazine® R]**
pro’klor•për’ä•zên [komp’ah•zen]
Availability: tablet: 10 mg prochlorperazine; ampul: 5 mg/mL in 2 mL ampul
Action: phenothiazide weak anticholinergic, strong extrapyrimidal, & moderate sedative effects, antiemetic
Indications: control of N/V, psychotic disorders (2nd line)
Contraindications: comatose states, children < 2y or < 20 lb, CNS depressants, pregnant or nursing women, pt bone marrow depression, hypersensitivity to phenothiazide
Precautions: extrapyrimidal symptoms (EPS) can be confused CNS s/s of Reye's syndrome, or other encephalopathy, neuroleptic malignant syndrome (NMS), antiemetic action mask s/s of OD of other drugs, anticholinergic (caution to glaucoma), interferes with thermoregulation
Side Effects: tardive dyskinesia (rhythmic involuntary movement of tongue, face, mouth, rarely extremities), thiazide diuretics orthostatic hypotension (pressor agents can cause paradoxical hypotension), agitation, insomnia, dystonias (muscle spasm: neck, back, carpo-pedal, tongue, jaw)
Interactions: plasma levels propranolol, alpha-adrenergic blocker
Dose: N/V: 5-10 mg PO t.i.d. or q.i.d. (max: 40 mg/day)
non-psychiatric anxiety: 5 mg PO t.i.d. or q.i.d. (max: 20 mg/day)
Pediatric Dose: N/V: 2½ mg/kg PO, PR b.i.d. or t.i.d. (max 1st day: 10 mg, max 2-5y: 20 mg/day, max 6-12y: 25 mg/day) [avoid use in young kids, administer fluids only]
Dog Dose: 0.1-0.5 mg/kg q 6-8h IM, SC

**Ophthalmic**

**tetracaine hydrochloride (ophthalmic solution) [Pontocaine® R, Achromycin® R]**
tet’rā•kān hī’drō•klō’rid [ak’ro•mi’sin]
Availability: 1 mL dropper bottle
Action: local anesthetic of the ester linkage type (related to procaine)
Indications: anesthetic for eye examination only
Contraindications: hypersensitivity to drug
Precautions: use for exam only, possible eye damage if used removal of an existing foreign body
Interactions: not sulfonamides (inhibits action)
Dose (All): gtts X or (for exam only)
cyclopentolate hydrochloride (ophthalmic solution) [Cyclogyl®]

si'klö•pên'tō•lät hī'drō•klō'rid

Availability: liquid: 0.5%, 1%, 2% solution of cyclopentolate in 2 mL dropper bottle
Action: cycloplegic (paralysis of ciliary muscle) & mydriatic (dilation of pupil), rapid action but shorter duration than atropine
Indications: pain ò corneal abrasion, or if patching eye
Contraindications: hypersensitivity, glaucoma (narrow angle anterior chamber)
Precautions: may cause CSN disturbances (young), observe for 30 min post administration
Side Effects: alters vision, similar to other anticholinergic drugs
Dose (All): 1 gtt in effected eye, followed by 1 gtt in 5 min (infants use only 0.5% conc)

sulfacetamide sodium [Sodium Sulamyd® Ophthalmic Ointment 10%]

süf'fa•set'a•mid [so'de•üm sü'läh•mid]

Availability: ointment: 100 mg sulfacetamide sodium per gram ointment (3.5 g tube)
Action: bacteriostatic by competition for acids required for growth
Indications: bacterial infections of the cornea and conjunctiva, trachoma (chronic contagious conjunctivitis)
Contraindications: hypersensitivity to sulfonamides
Precautions: fungi may grow c use, inactivated by some purulent exudates, store away from heat, darkens c age & should be discarded, when a bacteriostatic agent is used eradication of infecting organism depends on host defenses
Side Effects: local irritation, stinging, burning (discontinue use)
Interactions: incompatible c silver preparations
Dose (All): apply a ribbon ½" long (in pocket between eye and lid, then look down before closing lids) q.i.d. & @ bedtime

polymyxin B-Bacitracin [Polysporin Opthalmic Ointment]

pöl'ë•miiks'ën b bäs•ë•trä'sín [pöl'ë•spor•ën]

Availability: ointment: polymyxin B sulfate and bacitracin zinc in white petroleum jelly (1/8 oz tube)
Action: bacteriosidal (gram +& bacilli, gram - cocci)
Indications: superficial ocular infections involving the conjunctiva and/or cornea caused by susceptible organisms
Contraindications: hypersensitivity to components
Precautions: ophthalmic ointments may retard corneal healing, prolonged use may result in overgrowth of nonsusceptible organisms including fungi
Dose (All): apply a ribbon ½" long (in pocket between eye and lid, then look down before closing lids) q 3-4 h & @ bedtime

acetazolamide sodium [Diamox®]

as'et•ah•zol•ah•mid [dia•môx]

Availability: tablet: 250 mg acetazolamide sodium
Action: controls fluid secretion (carbonic anhydrase inhibitor)
Indications: edema due to CHF, centrencephalic epilepsies, chronic open-angle glaucoma, acute mountain sickness in climbers attempting rapid ascent

Contraindications: when Na, & K blood serum levels↓, kidney, liver, adrenal dysfunction, hypercholoremic acidosis, 1st trimester pregnancy

Precautions: ↑dose does not↑diuresis (may↑drowsiness & paresthesias)

Side Effects: minimal (paresthesias, loss of appetite, polyuria, drowsiness, confusion, photosensivity)

Interactions: aspirin (concomitant administration with high-dose aspirin may result in anorexia, tachypnea, lethargy, coma and death).

Dose:
- acute mountain sickness: 500-1000 mg/day (divided doses) initiate dosing 24-48 hrs before ascent and continue for 48 hrs (or as necessary)

**Fluorescein strips**

Availability: strip

Action: green coloration sticks to damaged tissue

Indications: abrasions of the cornea and conjunctiva

Contraindications: hypersensivity

Dose (All):
- touch inside lower lid of eye & end of strip moistened & gtt putting anesthetic into eye or flushing saline, inspect under (cobalt blue) light

**Cardiac/Respiratory**

**albuterol (salbutamol) [Proventil®, Ventolin®]**

äl’bū•ter’öl [pro•vent’il, vent’ö•lin]

Availability: metered dose inhalation: 90 µg per inhalation

Action: sympathetic agonist (β₂ selective, bronchodilatation)

Indications: asthma, bronchospasm (associated COPD/bronchitis/emphysema)

Contraindications: symptomatic tachycardia, hypersensitivity to drug

Precautions: monitor vitals, EKG, caution known heart disease

Side Effects: palpitations, anxiety, headache, dizziness & sweating, tremor

Interactions: potentiates action of other sympathetic agonists (minimal)

Dose:
- metered inhaler: 2 sprays (90 µg/spray) q 4-6h

Pediatric Dose: (>12y) 0.15 mg/kg in 2.5 mL NS

**epinephrine 1:1000 (adrenalin) [EpiPen®, Ana-Kit®]**

ep’i•nef’rin (ä•drèn’ā•lin) []

Availability: auto-injector: 0.3 mg epinephrine per injection ampul: 1 mg/mL in 1 mL vial

Action: sympathetic agonist (bronchodilatation, inotrope, chronotrope)

Indications: emergency Tx of allergic reactions (anaphylaxis), bronchial asthma

Contraindications: no absolute contraindications if indicated, tachyarrhythmias, hypertension

Precautions: monitor vitals, and EKG; protect from light and cold, if overuse of β agonists it may cause cardiac arrest

Side Effects: palpitations, tachycardia, anxiety, tremor, H/A, N/V, arrhythmias
Interactions: potentates action of other sympathetic agonists, effects potentated by tricyclic antidepressants and MAO inhibitors

Dose:  0.3 - 0.5 mg SQ q 20 min
Pediatric Dose:  0.01 mg/kg to 0.3 mg SQ q 20 min
Dog Dose:  bronchoconstriction & anaphylaxis: 0.02 mg/kg to 0.5 mg SQ, IM q 20-30 min
Horse Dose:  anaphylaxis: 3-8 mg per 450 kg IM, SQ

nifedipine [Procardia® B, Adalat® B]
ni•fed'i•pēn [pro•kar'de•ah]
Availability:  capsule: 10 mg nifedipine
Action:  Ca⁺ channel blocker, smooth muscle relaxant (arteriolar vasodilation), ↓ peripheral vascular resistance
Indications:  angina pectoris, severe hypertension, chilblain
Contraindications: hypotension, hypersensivity to drug
Precautions:  monitor vitals, may worsen CHF, not β blockers
Side Effects:  dizziness, flushing, N/V, headache, weekness, hypotension
Interactions:  ↑ risk of CHF β blockers
Dose:  10 mg SL (puncture capsule and place under tongue, or swallow)
Pediatric Dose:  0.25-0.5 mg/kg SL

Antimicrobials

A good rule of thumb is to give therapy for 2-3 days after the temperature is normal and other signs of infection have dissapeared. All PO antibiotics should be taken 1 hr before or 3 hrs after food and other meds (especially antacids) to aid absorption from the intestinal tract. Monitor for signs of anaphylaxis. Do not mix therapy unless instructed to by command physician.

amoxicillin-clavulanate potassium [Augmentin® B, Clavamox® B]
ä•moks'i•sil'īn klā•vūl•ān'āt pō•tās'ē•ūm [awg•mēn't̬īn]
Availability:  tablet: 250 or 500 mg amoxicillin + 125 mg clavulanic acid
Action:  antibiotic broad spectrum of activity clavulanic acid which protects amoxicillin from degradation by enzymes produced by some bacteria making it usefull on these bacteria
Indications:  lower respiratory infections, otitis media, sinusitis, skin infections, UTIs, prophylaxis for mammal bites to hands or punctures, good for aerobic, anaerobic gram +/-
Contraindications: allergy to penicillin, mononucleosis (causes rash)
Precautions:  protect from humidity, store in temps < 24°C (75°F)
Side Effects:  diarrhea/loose stools (9%), nausea & urticaria (3%), vomiting & vaginitis (1%)
Interactions:  not disulfiram [Antabuse®] (produces unplesant reaction EtoH), not Allopurinol (rash)
Dose:  otitis, phanyngitis: 250 mg q 8h
respiratory infections, bites to hand, contaminated, or puncture wounds: 500 mg q 8h
Pediatric Dose:  (< 40 kg) 20 mg/kg/day in divided doses q 8h
otitis media, sinusitis, lower respiratory infections: 40 mg/kg/day in divided doses q 8h
Dog Dose: 12.5-25 mg/kg q 12h PO (do not exceed 30 d therapy, use 500/125 mg formulation)
Note: For the horse it is contraindicated due to f° of clavulanate acid.

ciprofloxacin [Cipro® B]
Availability: tablet: 250, 500, 750 mg ciprofloxacin
Action: broad spectrum antibiotic interferes c bacteria reproduction
Indications: lower respiratory, skin, bone, joint, & UTIs, infectious diarrhea, PID, sinusitis
Contraindications: hypersensitivity to other quinolone class antibacterials (nalidixic acid, cinoxacin, & floxin), pregnant & nursing women, children, immature animals, not effective c anaerobes
Precautions: may cause CSN stimulation, discontinue c hypersensitivity (skin rash, lip edema)
Side Effects: crystalluria in animals c alkaline urine (keep pt well hydrated), dizziness, lightheadeness, N/V, diarrhea
Interactions: prolongs half-life of theophylline, antacids containing magnesium or aluminum can interfere c absorption
Dose: UTIs: 250 mg q 12h; others: 500-750 mg q 12h (continue +2days after s/s have dissapeared; usually 1-2 weeks)
Dog Dose: UTIs: 5-8 mg/kg q 12h PO; skin & bone: 10-15 mg/kg q 12h PO; Contraindicated in dogs < 1 y old and during pregnancy, causes lameness (lesions of the cartilage in weight bearing joints) in immature dogs.

ceftaxone sodium [Rocephin® B]
[rö•sefin]
Availability: vial: 1g ceftriaxone crystalline powder (IM/IV: reconstitute c 3.6/9.6 mL LR 250/100 mg/mL conc)
Action: 3rd generation cephalosporin antibiotic (inhibits cell wall synthesis), effective against aerobic and anerobic, gram +/-
Indications: lower respiratory tract, skin, bone, joint, intra-abdominal, & UT infections, gonorrhea, PID, meningitis, surgical prophylaxis where procedure sterility is in question
Contraindications: hypersensitivity to cephalosporin class antibiotics
Precautions: do not exceed 2 mg/day c hepatic & renal disease, GI disease (colitis),
Side Effects: prolonged use causes overgrowth of nonsusceptible organisms
Dose: 1-2 gm/day (in 2 divided doses) IV, IM for 4-14 days (+2 days after s/s of infection gone) meningitis: 100 mg/kg/day (max: 4gm/day); gonorrhea: 250 mg IM (x1)
surgical prophylaxis: 1 gm ½-2 hr before surgery (x1)
Pediatric Dose: 50-75 mg/kg/day (in 2 divided doses) IV, IM (max: 2 gm/day)

erthyromycin [Erythrocin® B]
ë•rith'ë•ro•m'i•sin []
Availability: tablet: 250, 333 mg erythromycin
Action: inhibition of protein synthesis in susceptible organisms
Indications: upper & lower respiratory tract (e.g. otitis media, pharyngitis) (streptococcus) (penicillin V is drug of choice in Tx of streptococcal pharyngitis), skin & soft tissue (staphylococcus aureus) infections of mild to moderate severity, intestinal amebiasis (2nd line to Flagyl)

Contraindications: hypersensivity to drug, jaundice

Precautions: impaired hepatic function (excreted by liver)

Side Effects: GI (abdominal cramping, N/V, diarrhea), urticaria, ↑growth of fungi (c long term use)

Interactions: ↑theophylline levels (potential for toxicity), ↑carbamazepine levels in children using this drug (toxicity: ataxia, dizziness, N/V), ↑cyclosporine levels, ↑vasospasm associated c argotamine (Tx of migraine), terfenadine??, not c Seldane® or Hismanol®, ↓effect of Procaine [Novocain®], not c hypoglycemic agents (induces hypoglycemia)

Dose: 1 g/day in divided doses (250 mg q.i.d.) for at least 10 days (dosage may be↑up to 4 or more g/day according to severity, b.i.d. not recommended> 1 g/day)

Pediatric Dose: 30-50 mg/kg/day in divided doses

Dog Dose: 10 mg/kg q 8h PO {5-20 mg/kg q 8-12h PO}

Horse Dose: 10 mg/kg q 6h PO

**trimethoprim-sulfamethoxazole [Bactrim® B]**

tri•mèth¨ō•prim sul•fæ•mèth¨ō•k¨av•søl [bæk•tr¨im]

Availability: tablets: 80 mg trimethoprim & 400 mg sulfamethoxazole

Action: act to interfere c two sequential steps in the metabolism of certain bacteria

Indications: UTIs, acute otitis media (childern), chronic bronchitis (adult), entritis, travler's diarrhea, prostate infections, sinusitis, soft tissue (skin & muscle in vet med)

Contraindications: hypersensivity to components (especially sulfonamides "sulfa drugs"), megaloblastic anemia, pregnant or nursing women, infants (< 2 months)

Precautions: c hepatic or renal disease (excreted by kidneys), c anticonvulsant therapy, in malnutrition states, c severe allergies or bronchial asthma, keep pt hydrated to prevent crystalluria and stone formation (rare)

Side Effects: GI (N/V, anorexia), skin reactions (urticaria), neutropenia

Interactions: ↑prothrombin time c warfarin,↓clearance of Dilantin (anticonvulsant), ↑free methotrexate \mèth¨ō•trèk¨sæt\ (Tx leukemia)

Dose: 2 tablets q 12h, for 10-14day (5day for entritis)

Pediatric Dose: 4 mg/kg trimethoprim & 20 mg/kg sulfamethoxazole (2 tablet/20 kg) q 12h, for 10-14 days (5 days for entritis) (improved dosing??)

Dog Dose: 15 mg/kg q 12h IM, PO {30 mg/kg q 12-24h SC, PO}

Horse Dose: skin infections: 30 mg/kg q 12 h (4-6 weeks)

same as Dog

**doxycycline monohydrate [Monodox™ B, Vibramycin® B]**

dök¨s¨ē•si¨’kłën [mon¨ō•dók]

Availability: capsule: 100 mg of doxycycline

Action: broad spectrum antibiotic in the tetracycline group (excreted by kidneys 40% in 72h) primarily bacteriostatic
Indications: rocky mountain spotted fever, respiratory tract infections, urethral, rectal infections (chlamydia trachomatis), travelers diarrhea (prophylaxis or Tx), Lyme disease

Contraindications: hypersensitivity to tetracyclines, pregnant & nursing women, children

Precautions: may cause overgrowth of non-susceptible organisms (e.g. fungi), store at temp 15-30°C

Side Effects: use during tooth development (last ½ of pregnancy to 8y) may cause yellow-gray-brown colouration of teeth, photosensitivity (sunburn sensitivity), ↓prothrombin activity, GI, skin

Interactions: not ☐ penicillin, absorption impaired ☐ antacids, barbiturates, carbamazepine, phenotoin ↓½ life, not ☐ methoxyflurane (fatal renal toxicity), ↓effectiveness of oral contraceptives, aspirin (give 1 hr before/after)

Dose: diarrhea prophylaxis: 100 mg q 24h (for short trips 2nd line to Bactrim or Cipro)

Dog Dose: 5 mg/kg PO; 2.5 mg/kg in 12h, then 2.5 mg/kg q 24h for 7-10 days

Horse Dose: 3 mg/kg b.i.d. PO (has been associated with death when given IV)

metronidazole [Flagyl® R]

Availability: tablet: 250 mg metronidazole

Action: antibacterial (anaerobes) and antiprotozoal (excreted by kidneys 60-80%)

Indications: Tx of infections due to trichomonas vaginalis (trikˈəmədəˈnæs) or Giardia lamblia (jeˈärde•a lamˈbi•liˈə) (protozoa possessing flagella) (amebic dysentery), anaerobic bacterial infections (peritonitis, intera-abdominal abscess, liver abscess, skin, gynecologic, bone & joint, CNS, respiratory), for anaerobic gram - infections

Contraindications: hypersensitivity to drug, 1st trimester pregnancy

Precautions: possible carcinogen, ☐ hepatic disease,

Side Effects: nausea, convulsive szures and peripheral neuropathy (parasthesia of extremity), mouth (metallic taste, furry tongue from Candida overgrowth), darkened urine, dysuria, polyuria, joint pains

Interactions: not ☐ alcohol (abdominal cramps, N/V, H/A), ↑anticoagulant effect of warfarin, phenotoin or phenobarbital ↑clearance, cimetidine ↓clearance, not ☐ disulfiram [Antabuse®] (psychosis), terfenadine, ketoconazor?, not ☐ Seldane®

Dose: trichomoniasis: 250 mg PO t.i.d. for 7 days {2 gm single dose}

amebiasis: 750 mg PO t.i.d. for 5-10 days

anerobic bacterial infections: 7.5 mg/kg PO q 6h (max: 4 g/day) for 7-10 days

Pediatric Dose: amebiasis: 35-50 mg/kg/day PO t.i.d. for 10 days

Dog Dose: giardia & trichomoniasis: 30-60 mg/kg/day PO for 5-7 days {25 mg/kg PO b.i.d.}

amebiasis: 60 mg/kg/day PO for 5 days

anerobic bacterial infections: 25-50 mg/kg PO q 12h

Horse Dose: anerobic bacterial infections: 15-25 mg/kg q.i.d. IM, PO {20-25 mg/kg PO q 12 h}

miconazole nitrate [Monistat-derm® R, Micatin®]

Availability: tube: 15g (miconazole nitrate 2% conc)

Action: topical anti-fungal (imidazole class)
Indications: athlete's foot (Tx till gone, could be for 1 month), vaginal yeast infections
Precautions: discontinue use if irritation occurs, not for use in the eye
Side Effects: contact dermatitis, itching, burning
Dose: cover affected area b.i.d.

**Antitussive**

dextromethorphan hydrobromide [Hold®]
dēks’ترو•meth’or•fân []
Availability: lozenge: 5.0 mg dextromethorphan HBr (10 in a plastic tube)
Action: antitussive
Indications: suppresses coughs for up to 4 hrs
Contraindications: chronic cough, or where cough accompanied by excessive sputum
Dose: 11 lozenges q 4 hr
Pediatric Dose: (6-12 h) 1 lozenge q 4 hr
Dog Dose: 0.5-2 mg/kg q 6-8 h PO

acetaminophen codeine phosphate [Tylenol #3® B]
(see Analgesics)

acetaminophen hydrocodone bitartrate [Vicodin® B, Lortabs® B, Anexsia® B]
(see Analgesics)

**Others**
lactated ringers [Hartman's Solution]
Availability: 1L bag for IV administration
Action: approximates the electrolyte concentration of blood (isotonic crystalloid)
Indications: hypovolemia
Contraindications: pulmonary edema (CHF), renal failure
Precautions: monitor for circulatory overload
Dose: bolus: 150-300 mL IV then reassess
KVO: 10 mL/hr
Pediatric Dose: bolus: 20 mL/kg IV, IO then reassess
Dog Dose: bolus: 10-40 mL/kg IV, IO then reassess
maintenance: 40-50 mL/kg/day IV
Horse Dose: bolus: 5-10 L q 30-60 min
3-7% NaCl (hypertonic solution): 4-6 mL/kg

thiamine hydrochloride (vitamin B₁)
thī’ah•mēn
Availability: tablet: 300 mg, ampul: 100 mg in 1 mL
Action: required for the metabolism of glucose
Indications: coma of unknown origin, alcoholism, delirium //dilirˈɛ•ʊm// tremens, adjunct in ethylene glycol poisoning therapy

Dose: 100 mg IV, IM; 300 mg PO

Dog Dose: 2 mg/kg IM, PO q 24 h

ethylene glycol toxicity: 100 mg PO q 24 h (facilitate glyconate to nontoxic metabolites)
Appendix A: Poison Control Centers (PCCs)

The following table presents several well known national poison control centers. In addition, various regional centers may exist.

<table>
<thead>
<tr>
<th>Control Center</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rocky Mountain Poison Center</td>
<td>(800) 525-6115</td>
</tr>
<tr>
<td>Animal Poison Control Center (University of Illinois)</td>
<td>(217) 333-3611</td>
</tr>
<tr>
<td>National Pesticides Telecommunication Network (EPA)</td>
<td>(800) 858-7378</td>
</tr>
<tr>
<td>Oklahoma Poison Information Center (snake antivenin)</td>
<td>(800) 522-4611</td>
</tr>
<tr>
<td>Pittsburgh Poison Center (Pittsburgh, PA)</td>
<td>(412) 681-6669</td>
</tr>
<tr>
<td>Delaware Valley Regional Poison Control Center (Philadelphia, PA)</td>
<td>(215) 386-2100</td>
</tr>
<tr>
<td>Northwest Regional Poison Center, St. Vincent Health Center (Eire, PA)</td>
<td>(800) 822-3232</td>
</tr>
</tbody>
</table>

Appendix B: Normal Values

<table>
<thead>
<tr>
<th></th>
<th>Adult</th>
<th>Pedi</th>
<th>Dog</th>
<th>Horse</th>
<th>Llama</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rectal Temp °F(°C)</td>
<td>99.6(37.5)</td>
<td>99.6(37.5)</td>
<td>99.5(37.5)</td>
<td>99(37.2)-101.3(38.5)</td>
<td>99.5-102.7 foal</td>
</tr>
<tr>
<td>Heart Rate (beats/min)</td>
<td>60-100</td>
<td>85-205(&lt;.25y)</td>
<td>100-190(.25-2y)</td>
<td>60-140(2-10y)</td>
<td>100-130</td>
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<td></td>
<td>100-130</td>
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<td>64-128 (&lt;3m)</td>
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<td>40-80 (3m-2y)</td>
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<td>28-40 (&gt;2y)</td>
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<tr>
<td>Respiratory Rate</td>
<td>12-20</td>
<td>40(&lt;.25y)</td>
<td>15-30</td>
<td>10-14</td>
<td></td>
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<tr>
<td>Daily water consumption</td>
<td></td>
<td></td>
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<tr>
<td>gal(L)</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Urine output ml/kg/day</td>
<td>50 (ml/hr)</td>
<td>24-48</td>
<td>20-100/45</td>
<td>3-18</td>
<td></td>
</tr>
<tr>
<td>Circulating blood volume</td>
<td>5-6 L</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Appendix C: Common Ailments and Treatments

amebiasis infection due to ameba characterized by diarrhea, weakness, N/V. Usually treated with metronidazol, and tetracycline.

live culture yogurt prophylaxis for yeast infections when using ciprofloxacin
Appendix D: Medical Abbreviations and Definitions

agonists increases, promotes
analgesic \( \uparrow \) threshold of pain
anaphylaxis acute allergic reaction characterized by angioedema and urticaria
angioedema condition characterized by development of urticaria and edematous areas of skin, mucous membranes. Can be fatal if involving the airway.
antagonist decreases
anticholinergic effects: drying of mucus secretions, dilated pupils, increased heart rate
ataxia inability to walk due to defective muscular coordination
athetosis a condition in which slow, irregular, twisting, snake-like movements occur in the upper extremities (esp. hands and fingers), performed involuntarily
a before a.c., p.c.
before meals, after meals
antihistamine blocks histamine release (group of drugs used to Tx allergy symptoms)
barbituates twice a day
b.i.d. blood pressure
BP with
\( \acute{c} \) congestive heart failure
CHF chronic obstructive pulmonary disease (bronchitis, emphysema)
COPD a nervous condition marked by involuntary muscular twitching of the limbs or facial muscles
CNS central nervous system
conjunctiva whites of the eyes
contraindicated inappropriate form of treatment
corticosteroids group of drugs having and anti-inflammatory effect on tissue
crystalluria appearance of crystals in urine, may occur after use of sulfonamides. can be prevented by keeping urine alkali
DT's delirium tremens develops 2nd-3rd day of alcohol withdrawal, pt experience hallucinations, LOC, seizures (ominous sign)
diaphoresis sweating
diuretic drug that promotes water elimination through urination
dyspepsia painful digestion characterized by vague abdm. discomfort, a sense of fullness \( \ddagger \) eating, heartburn, N/V, loss of appetite. symptoms may occur irregularly
dystonic impaired muscle tone
dysmenorrhea painful menstrual period \( \ddagger \)
dyspnea difficulty breathing
dysuria difficult of painful urination
edema swelling
emetic any agent that induces (causes) vomiting
enteric pert. to small intestine
ethylene glycol common component to automotive antifreeze, toxic to kidneys, s/s N/V, abdominal cramps, ataxia, vertigo, stupor, coma, death
endotracheal
ethyl alcohol (found in fermented drinks, wine, beer, etc.)
outside of the pyramidal tracts of the CNS. Symptoms include: tremors, chorea, athetosis, dystonia (e.g. Parkinsonism like).
gastro-intestinal
inflammation of the stomach (pain, tenderness, N/V, electrolyte changes)
disease characterized by increased pressure within the eye
drops (fluid measure)
headache
hour
hypertension, ↑BP
having to do with the liver
increased sensitivity, allergy
interranial pressure
of unknown origin
inflammation reaction to injury
intravenously
yellowness of the skin and conjunctiva due to bile pigment (liver problems)
kilogram
initial dosage of drug used to reach therapeutic levels in a minimum of time
level of consciousness
lactated ringers solution
monoamine oxidase inhibitors (group of drugs used to Tx depression)
dosage of drug required to maintain a desired effect
discomfort, uneasiness
causes constriction of pupil
causes dilation of pupil
nothing by mouth
nausea and vomiting
nonstroidal anti-inflammatory drugs
over dose, left eye
over the counter (not prescription)
infection of the inner ear
positional
a feeling of the heart racing or beating
numbness and tingling usually in extremities
study of metabolism and action of drugs, especially absorption, action, & elimination
PID  pelvic Inflammatory disease (usually a sequela of gonorrhoeae)
PO   by mouth
potentate to increase the effect of
precutaneous from the surface of the skin
PRN  as needed
pruritis  severe itching
pyretic having to do with fever
q     every
q.i.d. four times a day
renal having to do with the kidneys
Reye's syndrome
rhinitis running nose
s/s signs and symptoms
\*s without
sedation calming or lowered level of consciousness
sequela a condition following or resulting from a disease
sinusitis inflammation of sinus.
SC  subcutaneously
SL sublingual (under the tongue)
SOB shortness of breath
Tardive Dyskinesia a syndrome consisting of potentially irreversible, involuntary, dyskinetic movements especially of tongue, face, mouth, and jaw.
Tx treat
t.i.d. three times a day
tinnitus ringing in ears (sign of asprin OD)
tsp teaspoon
tussive relating to a cough
UTI urinary track infection
urticaria hives (raised red areas on the skin)
vertigo sensation of moving around, or having objects moving around, in space
male
female
one
two, etc.
left
right
increase, decrease
leading to
at

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