H-R4 OTHER COMMON SUBSTANCES		First Responder EMT AEMT Paramedic

NOTE: Poison Control may be contacted **[1-800-222-1222]** for **INFORMATION ONLY.** Treatment modalities must utilize these guidelines, or may be received through online Medical Control.

Other Common Substances		
Substance	Notes	Treatment (beyond typical supportive care)
Acetaminophen (Tylenol) *N*-acetyl-*p*-aminophenol Paracetamol	• Acute overdose = asymptomatic to minimal GI effects • Days 2 to 3 (stage 2) = may have clinical signs of hepatotoxicity (RUQ pain and worsening GI sxs) • May progress over several days to fulminant hepatic failure	ED Treatment: **N-Acetylcysteine (NAC)**

Alcohols
Ethanol
Ethylene Glycol
Isopropyl Alcohol
Methanol
	• Symptoms: all alcohols primarily cause CNS Depression (inebriation)
	• **Isopropyl Alcohol** (rubbing alcohol)
	  ○ Twice as potent & duration of action is 2-4 times that of ethanol
	  ○ Gastric irritation/GI bleeding more common (**hemorrhagic gastritis**)
	  ○ No significant metabolic acidosis
	• **Methanol** & **Ethylene Glycol**
	  ○ Liver metabolizes to substances (formic acid & glycolic acid/oxalic acid, respectively) that **cause serious metabolic acidosis and end-organ damage**
	• *Methanol*: windshield wiper fluid, solid fuel for stoves/chafing dishes, model airplane fuel, carburetor cleaner, solvents, etc.
	• *Ethylene glycol*: many uses as a glycerin substitute, antifreeze, brake fluid, etc.
		ED treatment:
		Fomepizole
		• Used to inhibit the metabolism of ethylene glycol and methanol to their toxic metabolites

Anticholinergics Antihistamines *Cetirizine (Zyrtec)*	• Present in over 600 compounds, including prescription drugs, over-the-counter medications, and plants • **Antihistamine (particularly**	

Chlorpheniramine (Chlor-Trimeton) *Cyproheptadine (Periactin)* *Desloratadine (Clarinex)* *Diphenhydramine (Benadryl)* *Dimenhydrinate (Dramamine)* *Disodium Cromoglycate (Intal)* *Fexofenadine (Allegra)* *Hydroxyzine (Atarax)* *Levocetirizine (Xyzal)* *Loratadine (Claritin)* *Promethazine (Phenergan)* *Tripelennamine* <u>Other Medications</u> *Atropine* *Benztropine (Cogentin)* *Cyclobenzaprine (Flexeril)* *Glycopyrrolate* *Hyoscyamine (Levsin)* *Ipratropium (Atrovent)* *Scopolamine* *…and <u>many</u> other Antidepressants, Antipsychotics, Anti-Parkinsonian or similar neurologic medications* *Also see "Poisonous Plants" [H-RXXXX] for more*	**diphenhydramine/Benadryl) overdose is the most common overdose that produces anticholinergic toxicity** ● Symptoms (<u>Anticholinergic toxidrome</u>): ○ "Dry as a bone" (anhidrosis/no sweating and dry mouth/mucous membranes) ○ "Red as a beet" (flushed) ○ "Hot as a hare" (hyperthermia) ○ "Blind as a bat" (myadrysis/blurry vision) ○ "Mad as a hatter" (delirium/hallucinations) ○ "Stuffed as a pipe" (urinary/fecal retention) ○ "Tacky as an ugly sweater" (tachycardia)	
Antimicrobials *Various Antibiotics* *Various Antifungals* *Various Antivirals*	● Symptoms: ○ Generally mild to moderate GI upset ○ Seizures/CNS effects possible in high doses	
Methylxanthines	● Mechanism = induces the release of	**Switch to Decaf**

Caffeine *Doxofylline* *Pentoxifylline* *Theobromine (chocolate)* *Theophylline*	endogenous catecholamines → CNS stimulation ● **Sympathomimetic toxidrome:** seizures, tachycardia, vasodilation, diaphoresis, etc. ○ Mild sxs = GI (nausea and vomiting) ○ Severe sxs = CNS excitation (seizures) ● Theophylline and its water-soluble salt, aminophylline, were used in the past for asthma and COPD	
Nicotine & Nicotine-like toxins *Tobacco* *See "Poisonous Plants" [H-RXXXX] for more*	● **Children who ingest ≥1 intact cigarettes, or ≥3 cigarette butts** will generally become symptomatic within 30 minutes ● Mechanism: overstimulation of nicotinic cholinergic receptors ○ Mild = nervousness and tremor ○ Severe = paralysis/respiratory failure ● Mild sxs = GI (most common), tremor, dizziness, tachycardia, and bronchorrhea ● Severe ingestions can result in **seizures**, respiratory failure, hypotension, dysrhythmias, and death ○ Generally seen with ingestion of nicotine-containing pesticides, **nicotine-containing E-cigarette liquid,** or abuse of dermal patches/gum	
Nonsteroidal anti-inflammatory drugs (NSAIDs) *Celecoxib (Celebrex)* *Diclofenac (Voltaren)* *Etodolac* *Fenoprofen* *Flurbiprofen* *Ibuprofen (Indocin)* *Indomethacin (Motrin)*	● Rarely produces serious complications ● Symptoms = gastric irritation (nausea, vomiting, potential GI bleeding, etc.) ● In *massive* NSAID ingestions, metabolic acidosis with altered mental status and cardiovascular dysfunction (shock) may occur	

Ketoprofen *Ketorolac (Toradol)* *Meclofenamate* *Meloxicam (Mobic)* *Mefenamic acid* *Nabumetone* *Naproxen (Aleve)* *Oxaprozin* *Piroxicam* *Sulindac* *Tolmetin*		
Salicylates *Aspirin (acetylsalicylic acid)* *Wintergreen Oil (methyl salicylate)*	• Numerous forms of salicylate are available as karyolytic agents, liniments, and combination products. All are rapidly converted to salicylate once ingested. • Causes a **metabolic acidosis with a respiratory alkalosis** • Mild symptoms = GI irritation (nausea/vomiting) • Serious toxicity → worsening acidosis & CNS dysfunction (altered mental status, seizures, coma, etc.) • **Hearing loss or tinnitus** are relatively pathognomonic	**Sodium Bicarbonate** **1-2 mEq/kg** • Systemic and urinary alkalinization are beneficial, although the precise mechanism is debated