

Poisoning

- 50% < 6 yo
 - Most mild
 - Most home
- 2nd peak adolescence

Toxic in Small Doses

= <1-2 pills and/or <5 mL

Hydrocarbons

Antimalarials

B blockers

Ca channel blockers

Camphor

Caustics

Clonidine

Nicotine

Alcohol high proof

Lomotil

Hypoglycemics

Antiidepressants

Methyl salicylate

Opioids

Phenothiazines

Organophosphates

Theophylline

History

- Preparation
- Timing
- Amount
- GO WITH WORST CASE SCENARIO
- Toxidromes:

Sympathomimetic

Adrenalin

- Amphetamine
 - Cocaine
 - Bath salts
-
- BP, P, T +++
 - Agitated, violent
 - Pupils dilated
 - Sweating

Anticholinergic

Antihistamine, ATROPINE = belladonna

- P ++
- Confusion, coma
- Pupils large
- Dry, hot
- Ileus, retention
- Can't sweat, pee, poop

Cholinergic

Organophosphates

- THE BIG SQUEEZE = all gets smaller
- Confusion, coma
- Pulse slow, small pupils, poop, pee, bronchi, secretions, vomiting, diarrhoea, lacrimation, salivation, sweating

Opioids

Morphine

– Pupils

Sedatives

Diazepam

Serotonin

SSRI's, MOAI

- More difficult because 'mixed'
- Neuromuscular hyperexcitability
- Clonus: lower > upper

Lab

- Salicylate
- Paracetamol = acetaminophen
- Glucose
- Alcohols

- Gases
- Osmolality
- CPK, liver function, levels

Anion Gap

- M ethanol, metformin
- U remia
- D iabetic ketoacidosis
- I soniazid, iron, massive ibuprofen
- L actic acidosis
- E thylene glycol
- S alicylates
- C ellular asphyxiants (cyanide, CO, HS)
- A lcoholic ketoacidosis
- T/P tylenol = paracetamol

Hypoglycemia

Remember:

- B blockers
and
- Ethanol in children

Radiopaque

Remember:

- CaCO_3
- Heavy metals
- Phenothiazine
- KCl
- Enteric coated

Levels

Useful:

- Salicylates
- Acetaminophen
- Some anticonvulsants
- Ethylene glycol
- CO
- Lead

Select Antidotes

Acetaminophen	NAC
Anticholinergics	Physostigmine
Benzo	Flumazenil
B blockers	Glucagon
Digitalis	Digibind
Ethylene glycol, methanol	Fomepizole (alcohol – drunk)
Iron	Deferoxamine
Methemoglobinemia	Methylene blue
Opioids	Naloxone

Select Antidotes

Sulphonylurea	Octreotide
Tricyclics	Sodium bicarb
Organophosphates	Atropine, Pralidoxime
Dystonic reactions	Diphenhydramine, benztropine
Fat-soluble drugs (Ca channel blockers, tricyclics)	Intralipid

Treatment

- Mostly supportive
- Decontamination?

GI Decontamination

- 1-2 hours unless:
 - GI slowing agents, bezoars (enteric-coated salicylates)
 - Very toxic
- NB ASPIRATION (GCS)
- Activated charcoal
 - Not alcohols, heavy metals (iron, lithium, lead), caustics
- Whole bowel irrigation (entero-hepatic circulation)
 - Charcoal doesn't work, patches, packets

Enhanced Elimination

- Urinary alkalization – salicylate
- Hemodialysis – methanol, ethylene glycol, salicylates, lithium, valproate)
- Multidose charcoal with cathartic – carbamazepine, phenobarb)

Acetaminophen

- Stages
 - I 5-24 hrs: GI
 - II 1-2 days: resolution, RUQ abd pain, raised LFT's
 - III 3-5 days: liver, multisystem failure
 - IV 4-14 days: 'resolution'
- Rumack-Matthew nomogram

Salicylate

- Uncouple oxidative phosphorylation
 - Stimulate resp centre
 - Inhibition tricarboxylic acid cycle
 - Stimulate glycolysis and gluconeogenesis
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- Nx, Vx, sweating, tinnitus
 - Tachypnoea, coma, sz
 - Resp alkalosis, anion gap
 - Rx: supportive, alkalinization

Iron

- 1st 30' – 6 hr: Vx, dx, abd pain
- 2nd 6-24 hrs: quiescent
- 3rd: multisystem failure, shock, metab acidosis
- 4th: liver failure
- 5th: GI strictures and obstruction

Miscellaneous

- Hydrocarbons – aspiration pneumonitis
- Methylene chloride (paint remover) – CO
- Methanol: windshield washer, paint remover
 - Vision, formic acid (metab acidosis), osmolar gap
- Ethylene glycol: antifreeze
 - Oxalic acid (metabolic acidosis), osmolar gap
 - forms crystals with Ca – acute tubular necrosis
- Isopropyl alcohol: ‘rubbing alcohol’, hand sanitizer, NO AG

Miscellaneous

- Nicotine: biphasic
 - Cholinergic then
 - Brady, hypotension, coma, resp failure
- Magnets (2)
- Batteries:
 - oesophagus – erosion
 - VERY quick - minutes