

POISONS SYMPTOMS

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ACETAMINOPHEN

- Initially - nausea, vomiting, right upper quadrant pain
- Later (>24 hours) - liver failure (jaundice and encephalopathy) and/or renal failure

AMPHETAMINES

- Euphoria, talkativeness, restlessness, tremors
- dry mouth, nausea, vomiting, diarrhea, abdominal cramps
- Palpitations, tachycardia
- Mania and delirium with hallucinations, mainly auditory
- Severe poisoning - convulsions and coma
- Chronic poisoning - amphetamine psychosis clinically resembling acute paranoid schizophrenia

COCAINE

- First acts as stimulant and then depressant of CNS
- Stimulant stage - dryness of mouth, euphoria, increased physical and mental energy, restless, excitement, delirium.
- Patient may become maniacal and may have hallucinations
- Flushed face, dilated pupils, blurred vision, tachycardia, hyperthermia, increased respiratory rate
- Toxic dose - incoordination, muscle twitching, convulsions
- Stage of depression - feeble respiration and collapse, ending in death from respiratory or cardiac failure
- Complications - MI, rhabdomyolysis, renal failure, intracerebral hemorrhage

Chronic cocaine poisoning

- Black tongue and teeth
- Ulceration of nasal septum
- Anorexia, weight loss, weakness, tremors, impotence, moral deterioration, insanity
- Increased erotic tension in women and nymphomania
- Many sexual perversions in males, mainly homosexuality
- Delusions of persecution and hallucinations, chiefly tactile and visual
- Magnan's symptom - paraesthesia which feels like a constantly moving foreign body, such as fine sand or powder, under the skin.

BENZODIAZEPENE

- Rapid onset weakness, ataxia, drowsiness
- Eyes - diplopia, nystagmus
- Respiratory depression - decreased respiratory rate and ventilation
- CNS depression - sedation, confusion, coma
- pupile size - normal

BARBITURATES

- Giddiness, ataxia and slurred speech
- Automatism - repeatedly takes more doses because they forget the previous ones, leading to severe overdose or death
- Excitement and delirium, followed by stupor and later coma
- Advanced poisoning - cyanotic face, BP falls, temperature subnormal, Cheyne stokes breathing, absent bowel sounds
- Oliguria
- Barbiturate blisters found on sites of friction or pressure, such as interdigital clefts, axilla, and inner aspects of knees and calves

ORGANOPHOSPHATE

Main toxic effects of organophosphates are muscarinic, nicotinic and on CNS

MUSCARINIC EFFECTS

Mnemonic (DUMBELS)

- Diarrhea
- Urination
- Miosis
- Bronchospasm
- Emesis
- Lacrimation (red tears) - red due to porphyrin in lacrimal glands
- Salivation

NICOTINIC EFFECTS

- muscle weakness
- Fasciculations
- Areflexia
- Muscle paralysis

EFFECTS ON CNS

- Irritability, restlessness, apprehension
- Fine fibrillary tremors of hands, eyelids, face or tongue
- Mental confusion progressing to stupor and muscle weakness with tremors and convulsions
- Coma with absence of reflexes and depression of respiratory and circulatory centers

CARBON MONOXIDE

- CO causes toxicity by binding with Hb forming carboxy-hemoglobin which reduces oxygen delivery and inhibits cellular respiration
- Initially - nausea, vomiting, ataxia, nystagmus, drowsiness, hyperventilation, hyper reflexia, shivering

- Later - coma, convulsions, hypotension, respiratory depression, and cardiovascular collapse, and ECG abnormalities such as ST depression, T wave abnormalities, ventricular tachycardia, ventricular fibrillation
- Poisoning during pregnancy - fetal hypoxia, intrauterine death

ETHANOL

- Stage of excitement - feeling of well-being and pleasure, may behave in obscene manner or talk in vulgar language, sexual desire may be aroused
- Stage of incoordination - incoordination of thought, speech and action, pupils are dilated
- Stage of narcosis - passes into deep sleep, pulse is rapid, temperature subnormal, breathing stertorous, pupils contracted
- McEwan's sign
- Alcohol cause faulty depth perception, poor peripheral vision, distorted color vision, and reduced night vision
- Fine lateral Nystagmus
- Tongue dry, furred or excessive salivation
- Impaired coordination leading to impaired finger nose test
- Reflexes are delayed and sluggish

Chronic alcohol poisoning

- Alcoholic dementia - gradual physical, moral and mental deterioration
- Cirrhosis of liver
- Delirium tremens - a state of excitement with hallucinations which usually lasts 3-4 days. Characterised by acute attack of insanity with symptoms of sleeplessness, marked tremors, excitement, fear and hallucinations chiefly visual and auditory.
- Korsakoff's psychosis - hallucinations, disorientation and multiple neuritis. Memory of recent events lost and he fills the gap by confabulation. This state last for about one month to a year.
- Acute hallucinosis - A state of hallucination chiefly auditory with systematized delusions of persecution lasting from weeks to months. It is a psychiatric emergency as patient may become homicidal or suicidal in response to hallucinations.

METHANOL

- Headache, dizziness, nausea, vomiting
- Pain in abdomen
- Findings of intestinal contractions is diagnostic
- Marked muscular weakness and depressed cardiac action
- Dyspnea and cyanosis
- Temporary or permanent blindness
- Convulsions
- Death occurs from respiratory failure

SNAKE BITES

- Poisonous snakes are elapids, vipers and sea snakes
- Elapids secrete neurotoxic venom (Cobra, king cobra common krait, banded krait, coral snake)
- Vipers secrete vasculotoxic venom. Vipers may be pit vipers (seldom fatal) or non pit vipers (dangerous)
- Sea snakes secrete myotoxic venom

NEUROTOXIC VENOM

- neurotoxins and cholinesterase
- slight burning at site of bite which shows a triple response
- 15 min to 2 hours later - marked neurotoxic effect
 - giddiness, lethargy, muscular weakness, spreading paralysis
 - salivation and vomiting
 - difficulty in speaking and swallowing
 - ptosis and paralysis of extraocular muscles
 - breathing slow and laborious
- A few hours later
 - respiration cease with or without convulsions
 - heart stops
 - skin and cellular tissues surrounding bite mark undergoes necrosis

VASCULOTOXIC VENOM

- venom include hemolysins, thromboplastin
- Locally - oozing of hemolytic blood, spreading cellulitis
- hemorrhages from external orifices
- serous and serosanguinous blisters sometimes appear
- nausea and vomiting
- collapse - cold clammy skin, rapid feeble pulse, dilated pupils insensitive to light

MYOTOXIC VENOM

- sharp initial prick becoming painless later
- 1-2 hrs later - generalised muscular pain and stiffness, starts in neck and limb girdle
- Myoglobinuria - characteristic brown discolouration of urine
- elevated serum transaminase
- hyperkalemia
- Respiratory failure