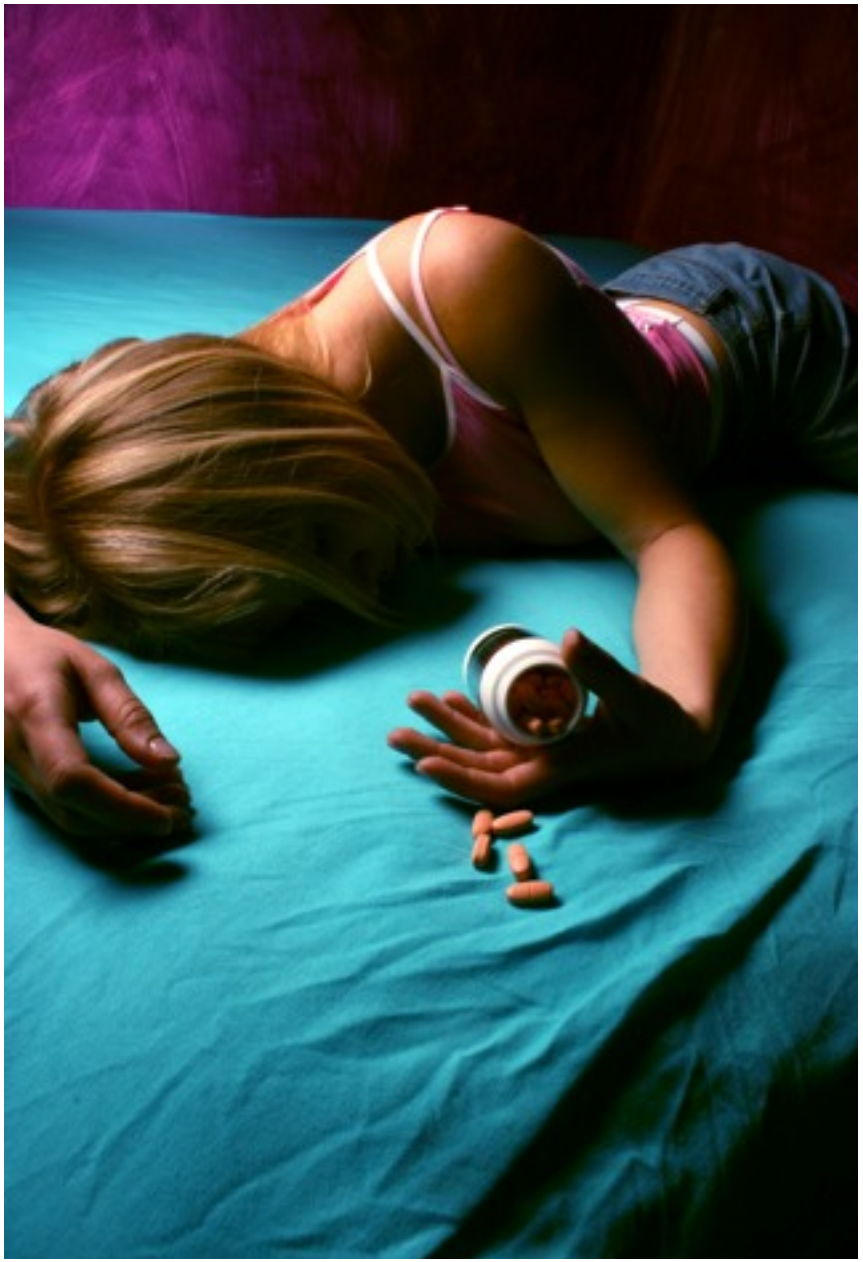
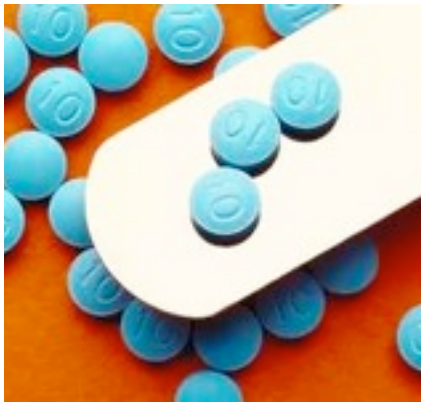
Poisoning

Mr Colin Dibble
Consultant in Emergency Medicine
North Manchester General Hospital



Contents

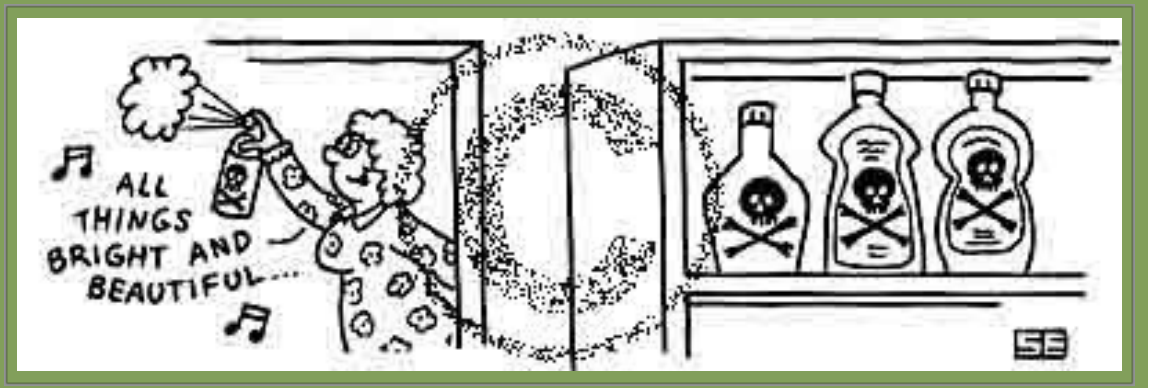


What are poisons?

poison |'poizən|
noun
a substance that, when introduced into or absorbed by a living organism, causes death or injury, esp. one that kills by rapid action even in a small quantity.
• Chemistry a substance that reduces the activity of a catalyst.
• Physics an additive or impurity in a nuclear reactor that slows a reaction by absorbing neutrons.
• a person, idea, action, or situation that is considered to have a destructive or corrupting effect or influence : the late 1930s, when Nazism was spreading its poison.

Background

- Suicide-commonest (34803 deaths from DSH in 2000)
- Accidental-1223 accidental drug OD deaths 1997. Children 1-5 commonest/?alcohol (5500 deaths 2000)
- Deliberate poisoning



History

- Think of poisons in any unconscious patient
- Relatives/Paramedics/Patient (but be wary)
- Packets brought with/drugs in house ?alcohol
- Suicide history if relevant
- Vomiting ?when
- Specific symptoms (fits/LOC etc)

Examination

- ABCD and manage as appropriate
- A-oro/nasopharyngeal ?ETT *O2*-nurse on side if worried-
- B-assist if hypoventilating-BVM
- C-pulse/BP/CRT-IV fluids if hypotensive, atropine if bradycardia etc
- D--GCS, pupils, ?focal signs. If GCS<8 consider anaesthetists
- Specific patterns

Specific Clinical Patterns

Specific Clinical Patterns

- Anticholinergic

Specific Clinical Patterns

- Anticholinergic
  - Altered mental status/Dry skin and mucous membranes/Fixed dilated pupils/Tachycardia/ Hyperthermia/flushing/Urinary retention

Specific Clinical Patterns

- Anticholinergic
  - Altered mental status/Dry skin and mucous membranes/Fixed dilated pupils/Tachycardia/ Hyperthermia/flushing/Urinary retention
- Cholinergic

Specific Clinical Patterns

- Anticholinergic
  - Altered mental status/Dry skin and mucous membranes/Fixed dilated pupils/Tachycardia/ Hyperthermia/flushing/Urinary retention
- Cholinergic
  - Salivation/Constricted pupils/Sweating/Wheezing

Specific Clinical Patterns

- Anticholinergic
  - Altered mental status/Dry skin and mucous membranes/Fixed dilated pupils/Tachycardia/ Hyperthermia/flushing/Urinary retention
- Cholinergic
  - Salivation/Constricted pupils/Sweating/Wheezing
- Narcotic

Specific Clinical Patterns

- Anticholinergic
  - Altered mental status/Dry skin and mucous membranes/Fixed dilated pupils/Tachycardia/ Hyperthermia/flushing/Urinary retention
- Cholinergic
  - Salivation/Constricted pupils/Sweating/Wheezing
- Narcotic
  - CNS and respiratory depression/Pinpoint pupils

Specific Clinical Patterns

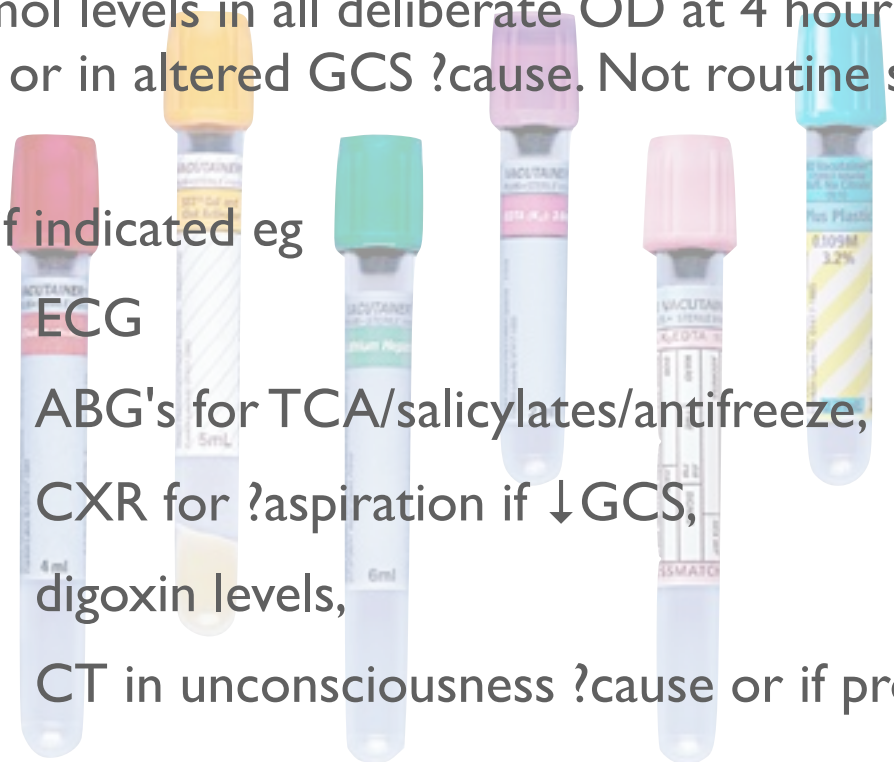
- Anticholinergic
  - Altered mental status/Dry skin and mucous membranes/Fixed dilated pupils/Tachycardia/ Hyperthermia/flushing/Urinary retention
- Cholinergic
  - Salivation/Constricted pupils/Sweating/Wheezing
- Narcotic
  - CNS and respiratory depression/Pinpoint pupils
- Sympathomimetic

Specific Clinical Patterns

- Anticholinergic
  - Altered mental status/Dry skin and mucous membranes/Fixed dilated pupils/Tachycardia/ Hyperthermia/flushing/Urinary retention
- Cholinergic
  - Salivation/Constricted pupils/Sweating/Wheezing
- Narcotic
  - CNS and respiratory depression/Pinpoint pupils
- Sympathomimetic
  - CNS excitation/Seizures/Tachycardia/Hypertension

Investigations

- Paracetamol levels in all deliberate OD at 4 hours post ingestion, or in altered GCS ?cause. Not routine salicylate levels.
- Specifics if indicated eg
  - ECG
  - ABG's for TCA/salicylates/antifreeze,
  - CXR for ?aspiration if ↓GCS,
  - digoxin levels,
  - CT in unconsciousness ?cause or if prolonged



Treatment

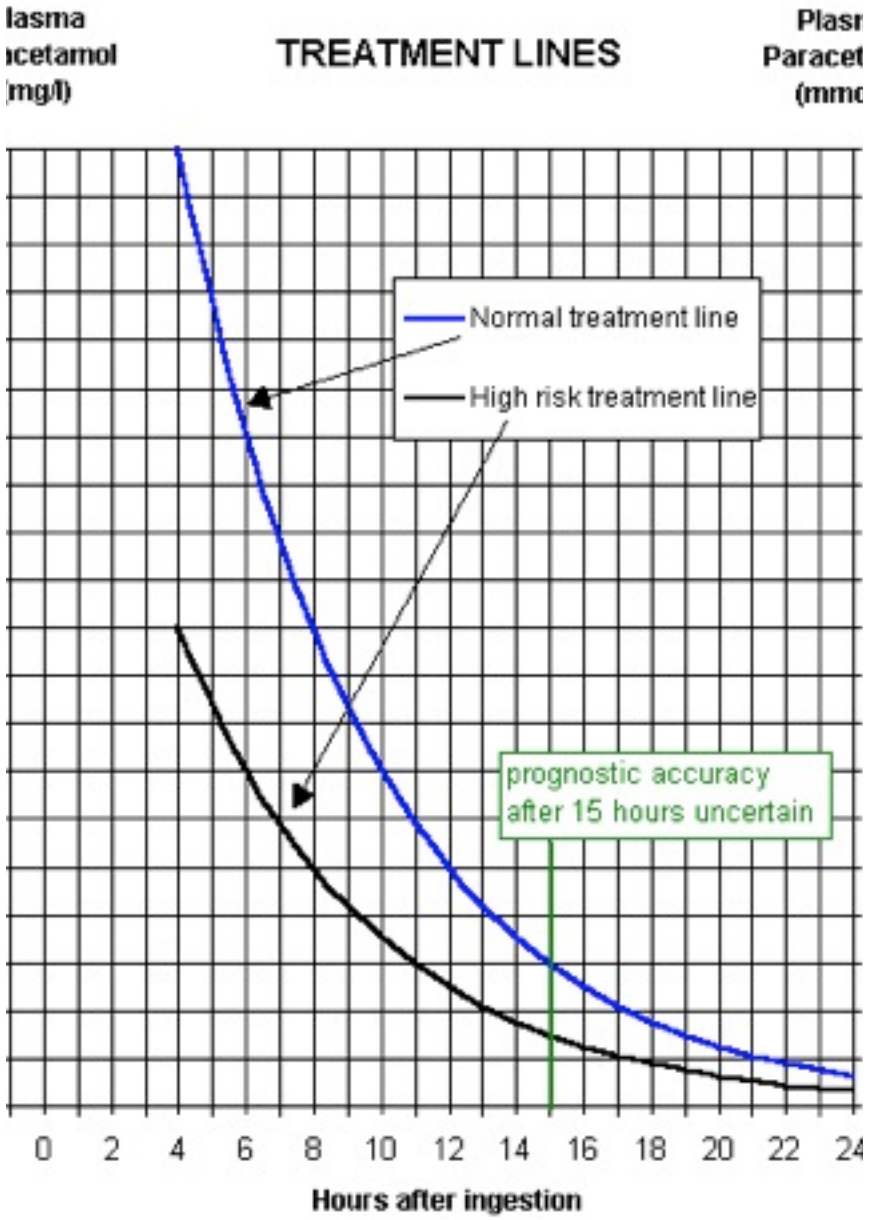
- Supportive ABCD's
- Consider RSI and ventilation if GCS <8
- Activated charcoal 50g in first hour if life threatening (not all eg Iron)
- Observe for 4-6 hours mostly- longer if controlled release
- check TOXBASE

Paracetamol

- Commonest
- check for 'high risk' for liver (alcohol/hepatitis/inducers eg antiepileptics, chaectiv)
- Acetylcysteine (Parvolex) if above/near treatment line

Paracetamol Overdose

Treatment Line

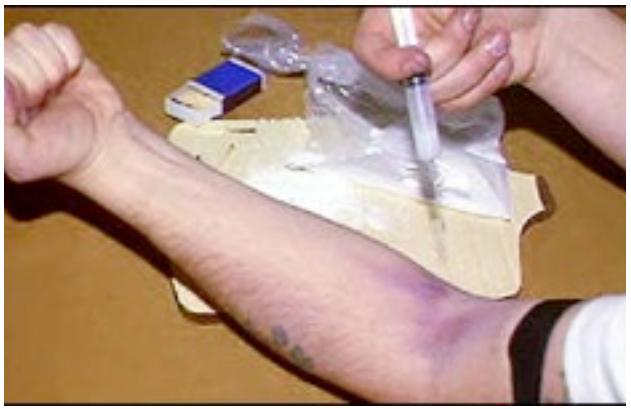


Paracetamol Overdose

- <4 hours: do levels at 4 hours and await results before treating
- 4-8 hours: start NAC and do levels IF levels cannot be obtained and treatment started within 8 hours, and >150mg/kg taken
- 8-15 hours: start NAC and do levels/LFTs/INR if >150mg/kg taken. If all OK and low risk-discontinue Parvolex home
- 15-24 hours: start NAC and do levels/LFTs/INR/Creat/ABG if >150mg/kg taken.Admit.
- >24 hours: No NAC unless jaundiced or hepatic tenderness. Do levels/LFTs/INR/Creat/ABG/PO_4. INR>1.3=NAC. If >48 hrs and normal-home
- If staggered OD: start NAC and do levels, LFT's, INR and repeat in paracetamol levels in four hours (refer RMO)

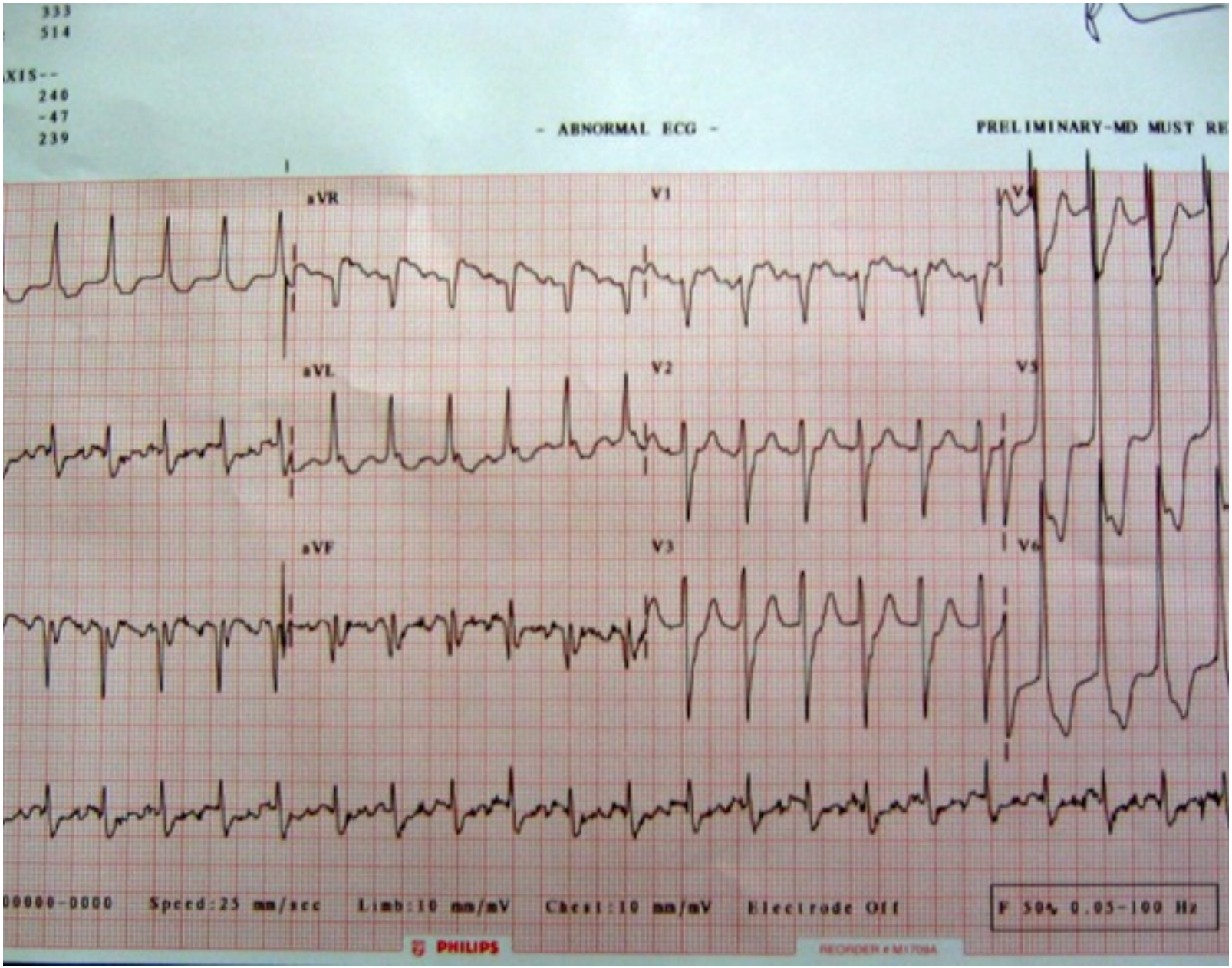
Opiate Overdose

- Naloxone 0.4mg IM and then 0.4-0.8mg IV up to 2mg + ?infusion
- Ventilatory support if req.



Tricyclic Overdose

- Common
- Potentially life threatening from arrythmias/ hypotension
- ECG-arrythmias/tachycardia/prolonged QRS
- Charcoal < & >1hour (delayed gastric emptying)
- give BICARBONATE


333
514
XIS--
240
-47
239
- ABNORMAL ECG -
PRELIMINARY-MD MUST RE
I
aVR
V1
V4
aVL
V2
V5
aVF
V3
V6
Speed:25 mm/sec
Limb:10 mm/mV
Chest:10 mm/mV
Electrode Off
F 50% 0.05-100 Hz
PHILIPS

Salicylate Overdose

- less common now
- hyperventilation/resp alkalosis then metabolic acidosis/ tachycardia/tinnitus/deafness/epigastric pain/vomiting/coma
- Charcoal < & >1hour (delayed gastric emptying)'its never to late for salicylate'

Mushrooms


'Death Cap'
Amanita phalloides

- rarely life threatening in UK
- Observe for 6-8 hours
- More lethal if symptoms develop >6 hours post ingestion (eg liver failure- aminita sp.)
- Most non-edible are hallucinogens
- Normally observe 4 hours

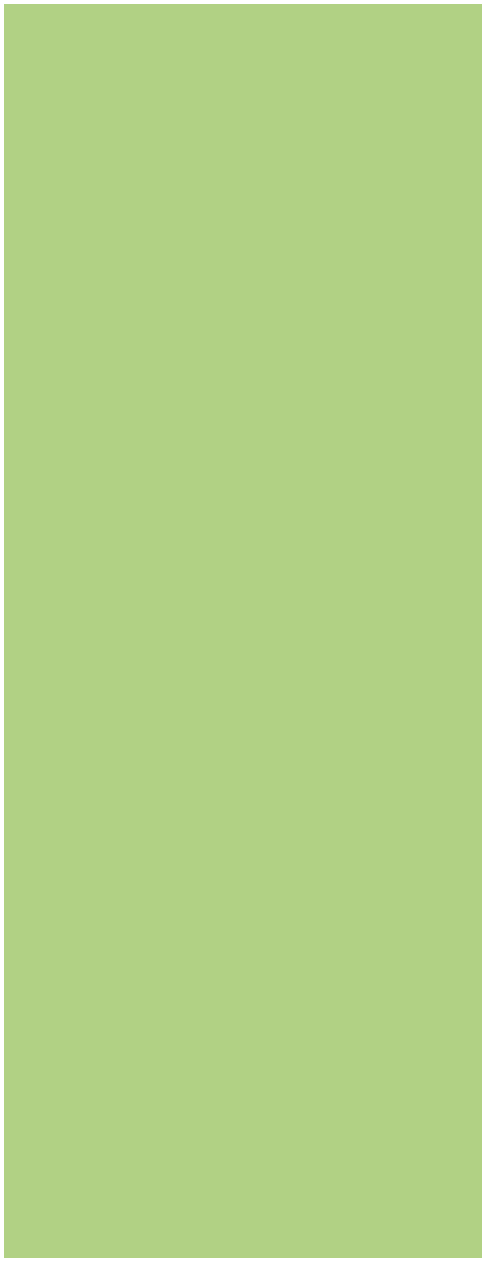

'Mower's mushroom'
Panaeolina foenisecii


'Common White Fibre Head'
Inocybe Mushroom

Miscellanous

- Digoxin-digoxin antibodies Fab
- Cyanide-amyl nitrite/sodium nitrate then thiosulphate
- Benzodiazepines-flumazenil
- Methanol-ethanol
- Organophosphates-atropine and pralidoxime
- Carbon monoxide-oxygen
- Calcium channel blockers-calcium
- Beta blockers-glucagon

Made on a
Mac




Made on a
Mac