

General Treatment of Poisoning Cases

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

By

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Pro of forensic medicine & clinical toxicology

Antidote

→ its effect is minimal if given late

+ موقتو فورا خلال toxin

قتل ال
ethanol
+ salicylate

+ حتى لو متوفر
effectiveness ال
موهالا شي
فارجي بخفضه المرضي 100%

General Treatment of Poisoning Cases

العمود الفقري للعلاج
→ A B C D E
التدخل السريع

- Good supportive care is the backbone of any successful therapy of poisoned patients
- Treat the patient not the poison.
- Attempts at decontamination of the skin or gastrointestinal tract almost never take priority over resuscitation and institution of supportive care measures.

لا نركز تذكر أو احنا نتعامل مع

patient

فك أخذ بالحسبان

Liver Filter أو غيره

موس حافظه Steps و مبسطة

بس مرات يشتغل على أكثر وقت جهه

فكك بعمل decontamination و يشتغل بال... ABC

- **Airway** ✓
- **Breathing** ✓
- **Circulation** ✓
- **Detect and correct:**

- **Seizures**

- Always generalised when due to toxicological causes

- Benzodiazepines first-line

- **Hypoglycemia** in Ethanol toxicity and salicylate

- Check bedside blood glucose level (BGL) in all patients with altered mental status

- **Emergency antidote administration**

Life saving → O_2 ← نقيض → CO في كلاً في

Bed test
بسر

Treatment of poisoned patient

General
management

- ABC
- DECONTAMINATION

Specific
treatment

- ANTIDOTE

Symptomatic

- BACKBONE

Stop Exposure and Emergency Treatment:

i - Stop Exposure:

Aim to prevent further exposure or administration of poisons:

In medically treated patient,

If toxic S & S of any drug appear stop the drug immediately.

In industrial or agricultural workers:

Removed from the polluted area.

In homicidal or suicidal cases:

Hospitalization and observation to prevent further exposure.

بتأكد انو patent airway

Airway:

Airway Opening & Clearance.

The greatest contributor to death from drug overdose or poisoning is respiratory failure.

• **Airway opening:**

Triple airway manoeuvre: (Head tilt. jaw thrust. mouth opening) [Slide 7](#)

• **Airway clearance:**

1. Finger sweep technique to remove any F.B., or denture [slide 8](#).
2. Suctioning of the mouth and oropharynx to remove secretions.

the tongue became flaccid and against posterior pharyngeal wall
→ obstruct airway passage

ii-
Emergency treatment:
ABC

most common cause of airway obstruction



*swallow tongue

- ① comatose patient
- + ② in supine position

لو اللسان داخل completely لورا

Finger sweeps = لو F.B. بعمل

الخطا في ايدى فتح Finger Sweeps

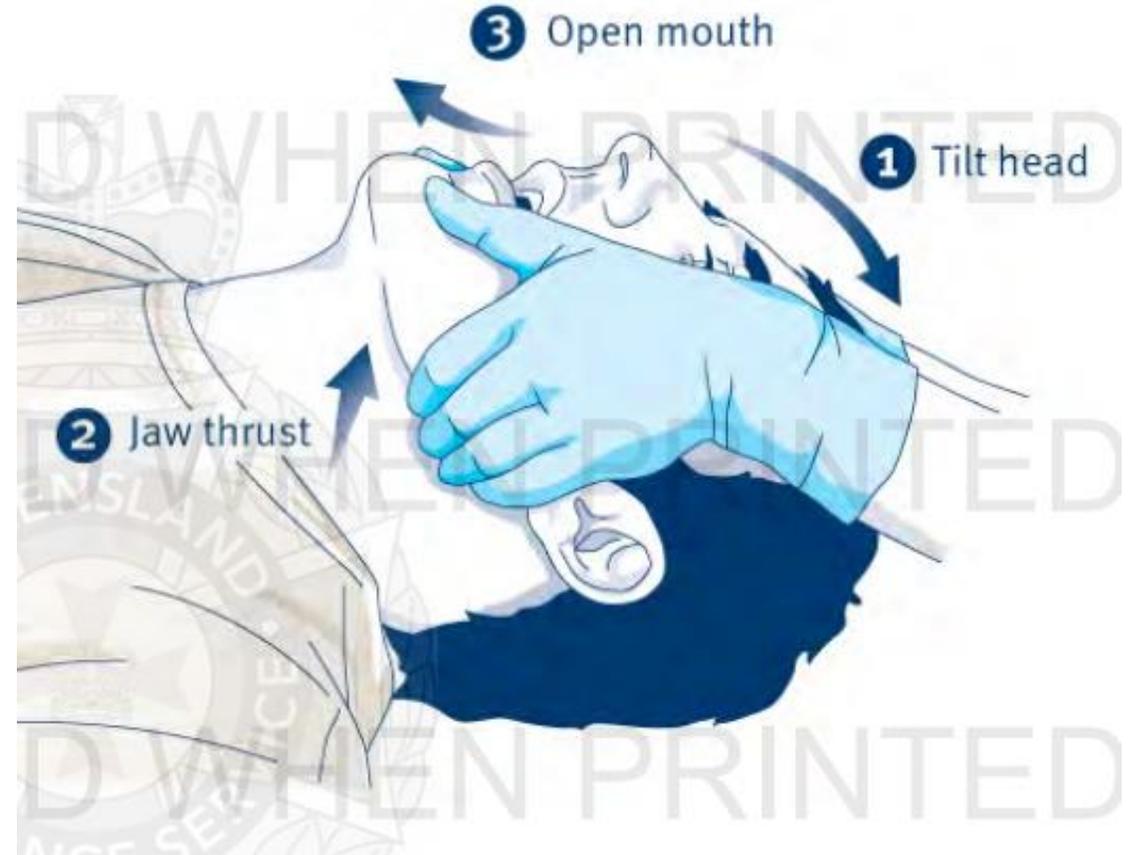
عيجها انو لازم الحوة تسالفة *
لاني ممكن ادخله الايدي

1. Turn patient on side.
2. Insert your finger into patient's mouth.
3. Curve your finger into a C-shape and sweep from one side of back of mouth to other.



① open the mouth أفم + شي = Triple manoeuvre

and
② jaw thrust



Finger Sweeps

1. Turn patient on side.
2. Insert your finger into patient's mouth.
3. Curve your finger into a C-shape and sweep from one side of back of mouth to other.



Breathing support:

اعطيه O_2

كيفه؟ حسب المكان

(1) Airway devices:

- o Oropharyngeal or nasopharyngeal airway devices:
- o Endotracheal intubation (ETT): in comatose patient.
- o Tracheostomy: In upper airway obstruction (ETT cannot be inserted).

(2) Assist ventilation: (oxygen)

بدل عنها

• Indication:

$PO_2 < 60 \text{ mmHg}$ & $PCO_2 > 60 \text{ mmHg}$.

Don't wait until the patient is apneic

ما تستنى المريض يوقفه
التنفس لحتى تبلىس الـ

• Methods:

Breathing

Mouth-to-mouth ventilation ✓

Mouth-to-mask ventilation (this method is more hygienic). ✓

Bag and mask ventilation. ✓

Bag and tube ventilation. ✓

Mechanical ventilation (used when resuscitative efforts are prolonged).



Nasopharyngeal tubes



Oropharyngeal tubes

mouth - mask



mask - Bag



ER لور واپال



intratracheal tube



Circulatory support:

Fluid res
IV

1. Begin continuous ECG monitoring.
2. Secure venous access.
3. Draw blood for routine studies.
4. If the patient is hypotensive, begin infusion of intravenous normal saline.
5. In patients are comatose, place a Foley catheter in the bladder, obtain urine for routine and toxicologic testing.

Volum overload عتانه ما تَدْخُل العرْوَيْن بـ

نُدخِل للعرْوَيْن poly catheter ← بَقَارَةُ الْوَيْ بَعْضِيَه بِال output

COMA (Important)

in DDX of (أى حالة)
 toxin — الحظي يلقى الـ

Differential diagnosis: Causes of coma:

1. **Toxic** (CNS depressants, anticholinergics and toxin causing cellular hypoxia e.g. HCN & CO)

internal medicine → 2. **Pathologic** (hepatic failure, renal failure, metabolic e.g. hypoglycemia, hypertensive encephalopathy, infections such as encephalitis or meningitis, etc.)

3. **Traumatic** (head injuries).

Coma = وعظم السوف بتدخل

→ و كانت **stimulators** or **inhibitory**
 internal stimulation
 يمينه يدخل الـ في
 depression

COMA (Important)

A. Treatment

1. ABC.

2. Give coma cocktail: **dextrose, thiamine, and naloxone plus O2**. Should be used as diagnostic or therapeutic

a. Dextrose 50%.

غير بال
hypoglycemia
Life saving
↑
↑
↑
hypoglycemia

Vit B1
(Chronic Ethanol) (لرذات)
encephalopathy متلازمة

b. Thiamine (Vit B1). Thiamine is given to prevent abrupt precipitation of Wernicke's syndrome resulting from thiamine deficiency in alcoholic patients.

c. Naloxone. All patients with respiratory depression should receive naloxone. Caution: Naloxone may precipitate abrupt opiate withdrawal. *in addict*

opioid antagonist
just IV (سحق في الوريد) + diagnostic

متلازمة في حالات
addict opioid
↓
بسرعة
withdrawal manifestation

d. Flumazenil (Anexate) if benzodiazepines are the suspected cause of coma.

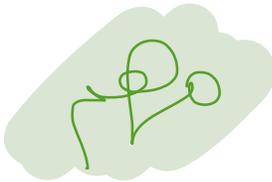
IV

في حالات ↑

عملت exclusion إذا كان السبب

pathology + Traumatic

احتمال كبير تكونه حالة تسمم، ليس بأشيش؟ ما يعرفه
هو يتعمل؟ وينظفه كوكترول



D. Decontamination

● A. Surface decontamination

Skin

Remove contaminated clothing

Flush exposed areas with copious quantities of water or saline

No need for chemical neutralization: the generated heat can create worse injury

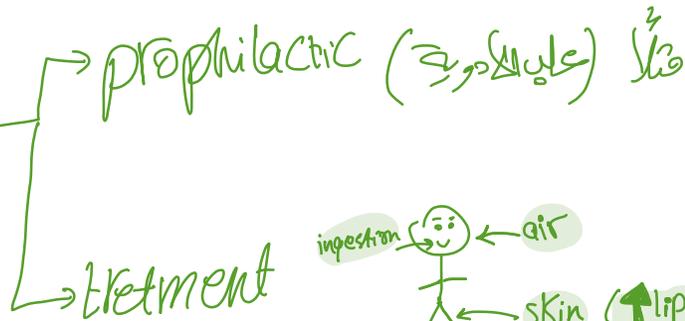
Eye

Flush exposed eyes with copious quantities of tap water or saline

Inhalation

Remove the victim from exposure

Give supplemental humidified oxygen



① prophylactic measure (تدابير وقائية)

وقائي H_2S ريجتو بيين فاسر و غالباً فعال في الوقاية الصحية
لو حد نزل لينقذ الشخص الي اعنى عليه منه لازم يلبس mask بالاول

② toxin (تسمم وصدور)

③ fresh air (انتقله لمكان)

GI toxin → Stomach و blood ۾ آڻيو ويندو آهي

- تو پھل
- ③ vomiting (Emesis) ← depend to time of ingestion
 - ② gastric lavage ← لو آڻيو ويندو آهي
 - ① activated charcoal (آڪٽيويڊ چارڪول)
 - ④ laxatives
- مستعمل

B. GI decontamination

1 Activated charcoal (AC) → has pores → make adsorption of toxin in surface 

It is fine black powder, odorless and tasteless.

AC may be used alone, after emesis, or with or after gastric lavage for substances known to be significantly absorbed by it.

(a) Indications:

Used after any toxic ingestion to limit drug absorption from the GIT, even if the substance is not known to be well adsorbed to charcoal.

Repeated oral doses of activated charcoal may enhance elimination of some drugs from the bloodstream

(b) Dose

The initial oral AC dose is 1-2 g/kg, or 15-30 g in children and 60-100g in adults.

One or two repeated doses of AC may be given at 1 or 2 hour interval to ensure adequate gut decontamination.

most effective dose

10 : 1
charcoal : toxin

or 1g : 1kg

Just one dose

Just one dose

gastric lavage في غسيل المعدة
salin وبيسول
orogastric tube بقطعة
activated charcoal بقطعة
tube وقيل ما قيل في tube

الوقاية من التسمم

3- Activated charcoal (AC)



(c) Contraindications

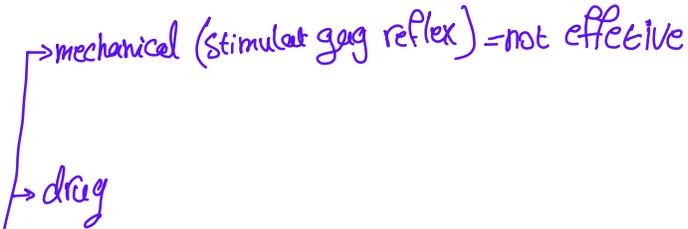
1. Caustic ingestion.
2. Poisons poorly absorbed by AC:
 - ❖ C: cyanide and corrosives. → *المادة العظيمة مارج تصيبك بالفتح*
 - ❖ H: metals and hydrocarbons. → *لا انهارح تذاوي كل مجرى الماكل لونه*
 - ❖ A: alcohol. → *حود هيك عاده نمنز بالنظير*
 - ❖ R: rapid onset or absorption as cyanide and strychnine.
 - ❖ C: chlorine and iodine.
1. Intestinal obstruction* and ileus.
2. Lack of adequate airway protection as in comatose*.

← poorly absorbed toxic

aspiration* of charcoal

has
cardiotoxic
effect

-2 Emesis



Syrup of ipecac عرق دهب is the preferred method for induction of emesis.

Dose: 30 ml (adults) and 15 ml (children) followed by drinking 2-3 glasses of water. The dose can be repeated once if no vomiting occurs in 15-30 minutes. Indicated in conscious patients

Contraindications

❖ Poison:

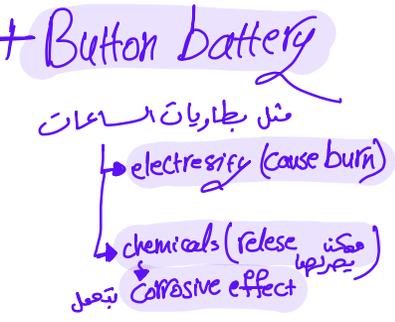
- Convulsants.
- Corrosives (inorganic).
- Carbon (Hydrocarbons).
- Sharp objects (needle, pin).
- Button battery

❖ Patients:

- Come aspiration
- late, ">1 hour"
- Children <6 months (gag reflex not well developed).
- Convulsion.
- Severe CVS disease or emphysema or respiratory distress.
- Recent surgical intervention (caused hernia)
- Hemorrhagic tendencies,
- Previous significant vomiting before this moment.
- Pregnancy to avoid potential mechanical effect on the uterus

جميعاً ما حذرنا من افادة تطبق مخازمة
متوفرة كمان مرة

مثل الكازو - تأثيره المخترع ال (lung)
بين السعال. نزيل ال
risk of aspiration



③-3 Gastric lavage

بدخل tube وبتسلي ال toxin
أو (صا بلاقل المصعب)

Indications:

- ③ If emesis fails in conscious patients
- ③ In patients taking antiemetic drugs
- ③ In comatosed patients after inserting endotracheal tube
- ③ In patients who have ingested a substance not bound to activated charcoal; e.g. heavy metals (iron, lead, lithium, Hg), cyanide, alcohols and glycols

بتسلي ال tube
ال بتسلي ال tube بتكونه جبير
after one hour or two
maximum

Contraindication: أهم شيء

- Corrosive. المنطقة التي حترقها ضعيفة
هناك خطر العرض بال tube
- Uncontrolled convulsions. because of the danger of aspiration or injury during the procedure
- Ingestion of petroleum / hydrocarbon → caused aspiration
- If time elapsed since drug ingestion exceeded 1 hour (except for salicylates)

*in comatose patient to prevent aspiration → comatose لا يوجد له دفاع طبيعي
بشكل trachia عبر

cuffed endotracheal tube

*also if the toxin or poison doesn't have a systemic effect.

Gastrointestinal (Gut) dialysis:

Repeated small doses of AC can be given, and it functions in 2 ways:

1. To prevent the absorption of toxins that are slowly absorbed from the GI tract.
2. To enhance the elimination of suitable toxins that have already been absorbed.

Indications

- 1- Drug excreted in the bile: (phenobarbital) *reexcreted in GI*
- 2- Drug excreted in the intestine: (morphine)
- 3- Drugs form Concretions: (salicylate). *حصى*
- 4- Drugs inhibit GIT motility: (morphine & anticholinergic).
- 5- Drugs of sustained release tablets: (theophylline) *slow release in GI* *in bronchial asthma*

- 4 - Cathartics

IT IS RARELY USED

main action
in kidney

Excretion Enhancement

toxin → ↓ ↓ ↓ ↓ ↓
Blood →

- **Aim:** increases the rate of elimination of already absorbed toxin.
- In vast majority of poisoned patient **GUT DECONTAMINATION** and **SUPPORTIVE CARE** are enough.
- Enhancement elimination techniques are indicated **LIMITED NUMBER** of patient.

Elimination Enhancement

Inside the body via kidney

Toxin eliminated outside body

Forced diuresis

Extracorporeal techniques

diuretics دوريتيكس

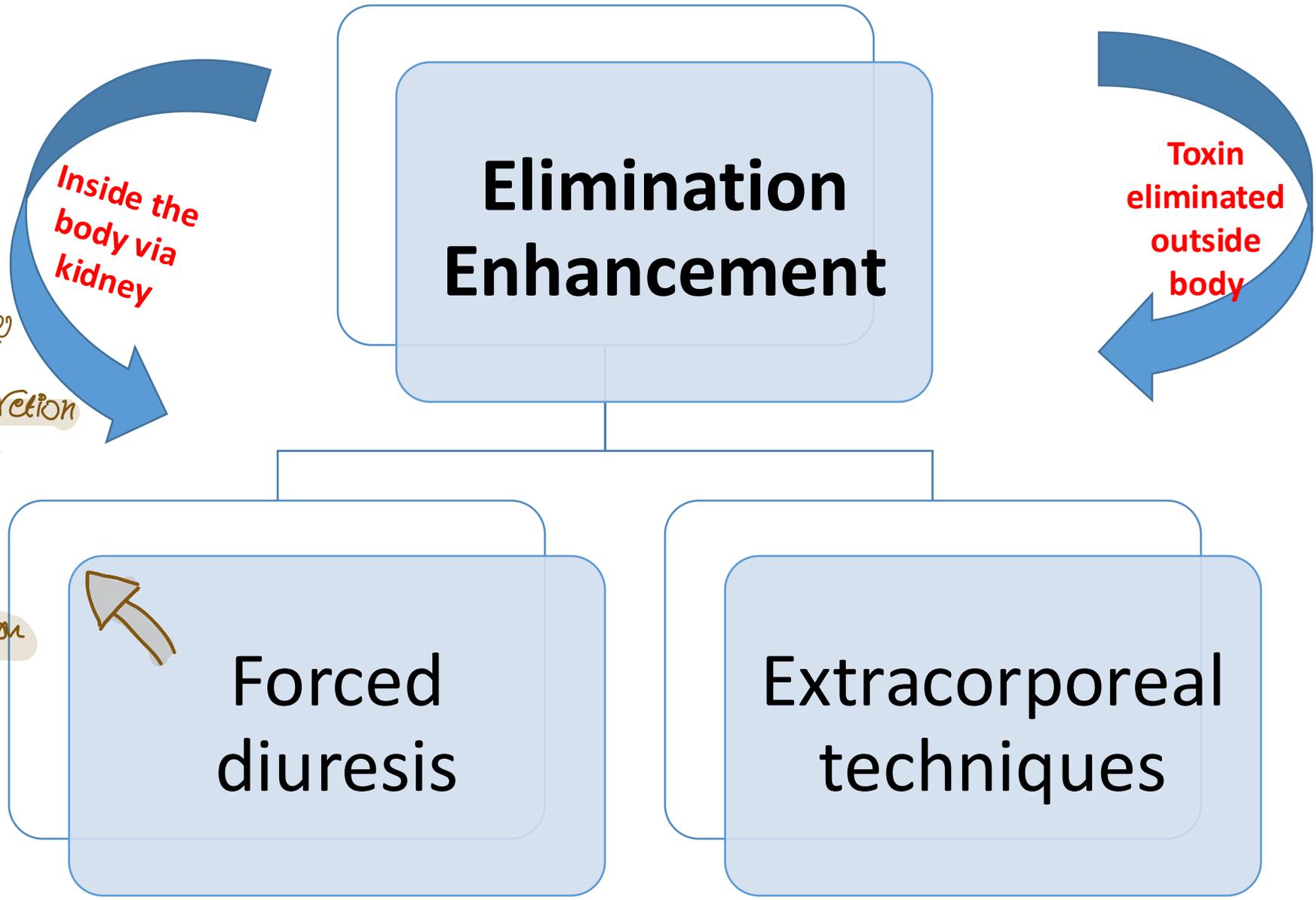
increase renal excretion + urine output



↓ ناتج

dehydration + hypotension

fluid سوائل



Forced diuresis

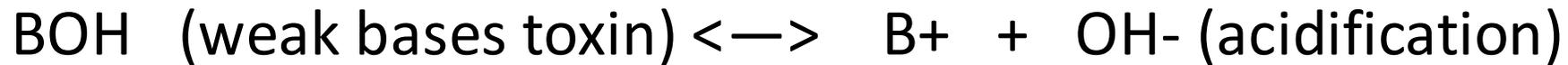
- **1st fact:** For toxins eliminated mainly by kidney; \uparrow urine flow \uparrow toxin elimination. (forced diuresis).
- **2nd fact:** \downarrow tubular reabsorption of drug (trapped in the renal tubules) \uparrow toxin elimination. (manipulation of urine pH)

How can we do these 2 facts????????????????????

*pH in tubule
toxin \rightarrow \leftarrow*

- **Forced diuresis** is achieved by administration of Na containing fluids as normal saline with diuretics.

- **Change urine pH**: convert the **lipid-soluble** intact acid (HA) or base (BOH) in the tubular lumen into the charged salt (**lipid insoluble**)(A- or B+):



- The lipid-insoluble cannot diffuse back into the extracellular fluid → trapped in tubular lumen and excreted.

- Alkalinization: IV sodium bicarbonate, 1–2 mEq/kg body weight \3-4h to ↑ urine pH to 7.5-8.

the toxin acid

↓
give alkaline substance
Sodium bicarbonate

+ forced diuresis

جاءت في الامتحان
toxin → ionize

ionizable form (charged)
not easy cell membrane

~~*~~ Any acidic toxin can be eliminated by forced diuresis and urine alkalinization?

• **No.** the criteria of toxin liable for it are:

• Mainly eliminated unchanged by the kidney

• Low volume of distribution.

• Low protein-bound.

• weak acids.

• Examples: salicylates, barbiturates.

digoxin → high volume distribution

Precautions:

- 1- **Renal function: assessed** before the beginning of therapy.
- 2- **PH and electrolyte** should be monitored.
- 3- **Auscultate lung base** for possibility of pulmonary edema.
- 4- The placement of a bladder catheter to **accurately measure urine output** is recommended.

Contraindications

- Congestive heart failure.
- Renal failure.
- Cerebral or pulmonary edema.

Acidification:

give
IV

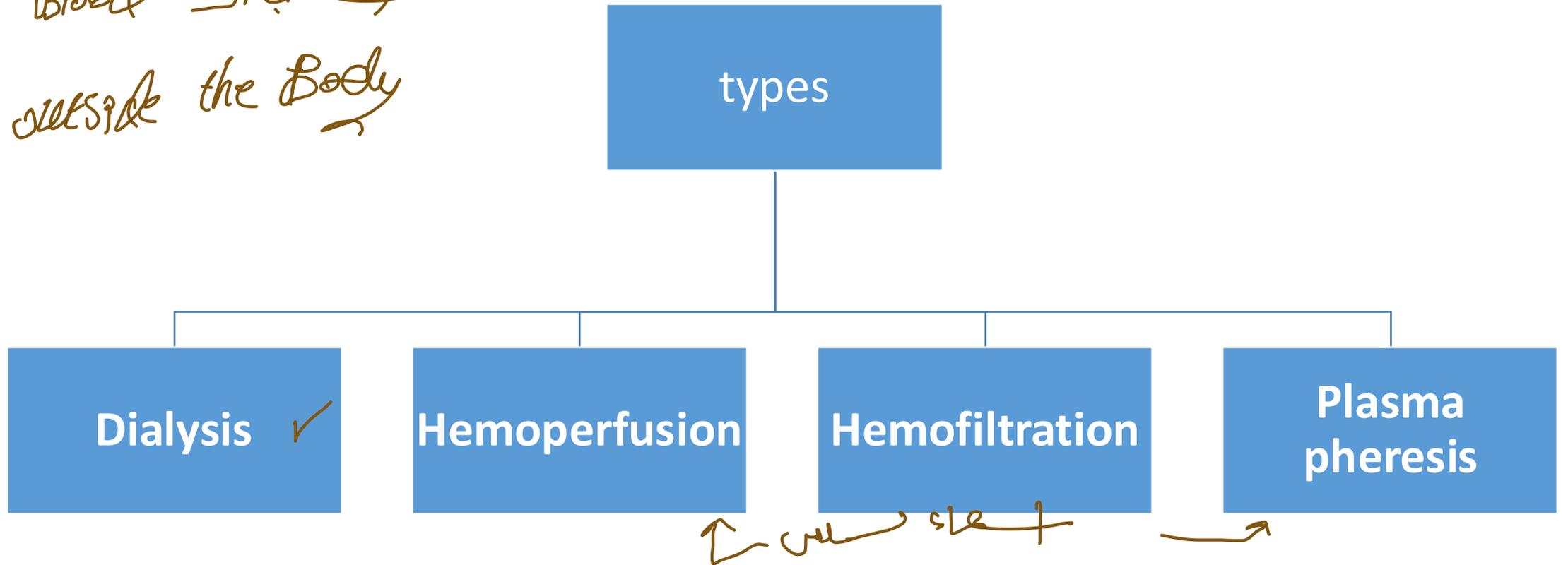
- Was used for weak bases as amphetamines and phencyclidine.
- Administration of weak acid as HCl or NHCl.
- Not used nowadays Why???????????

does not significantly enhance removal of toxins complicated by systemic metabolic acidosis.

forced acidic diuresis
حظيرة عنان هيدك
ما بيحعلها

Extracorporeal techniques (outside the ^{Body} body)

Blood *دم*
outside the Body



1- Dialysis

removal of poisons from blood to dialysis fluid according to concentration gradient through semipermeable membrane ether cellophane (haemodialysis or peritoneum (peritoneal dialysis).

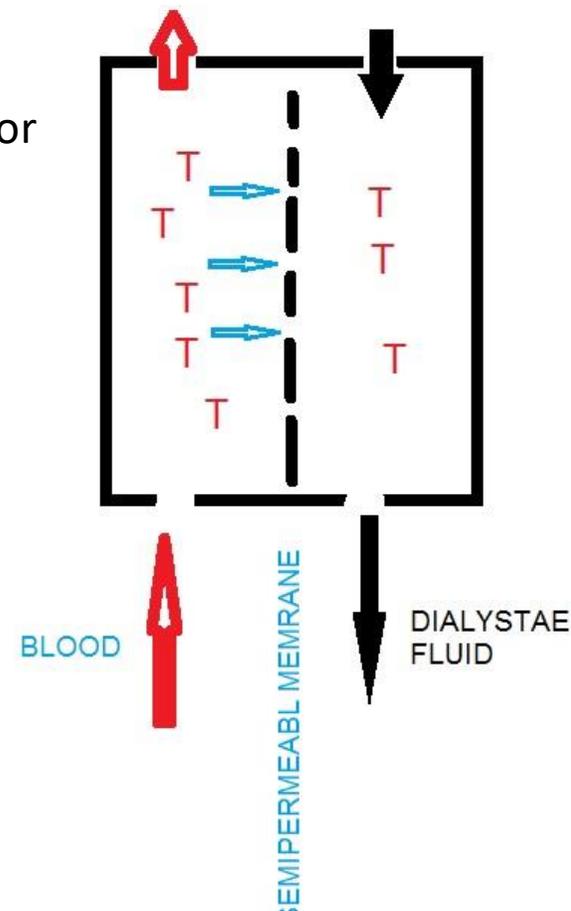
Indications: drugs that have the following criteria:

- Low molecular weight.
- Small volume of distribution.
- Low degree of protein-binding
- High water solubility.

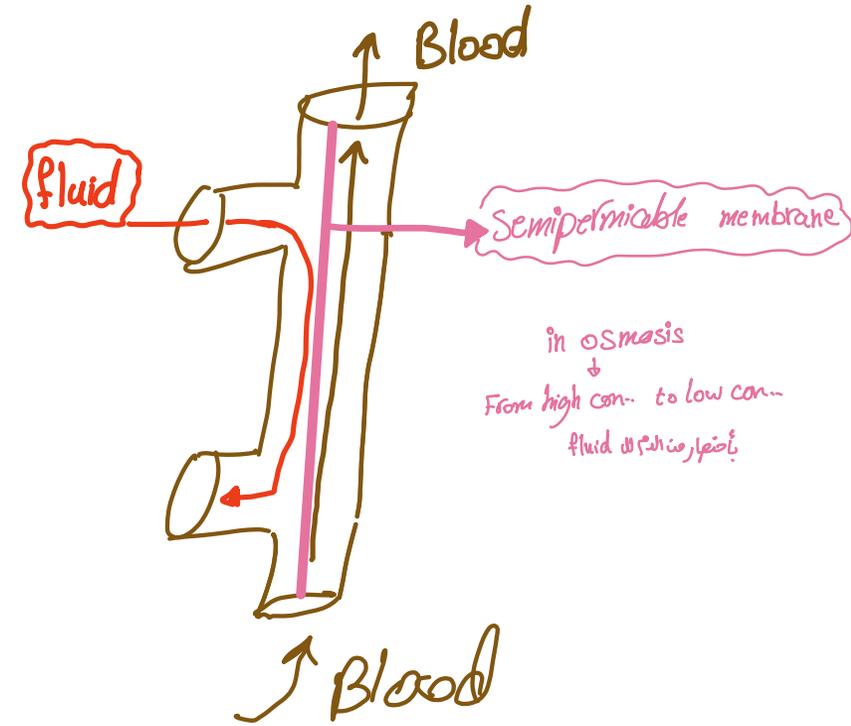
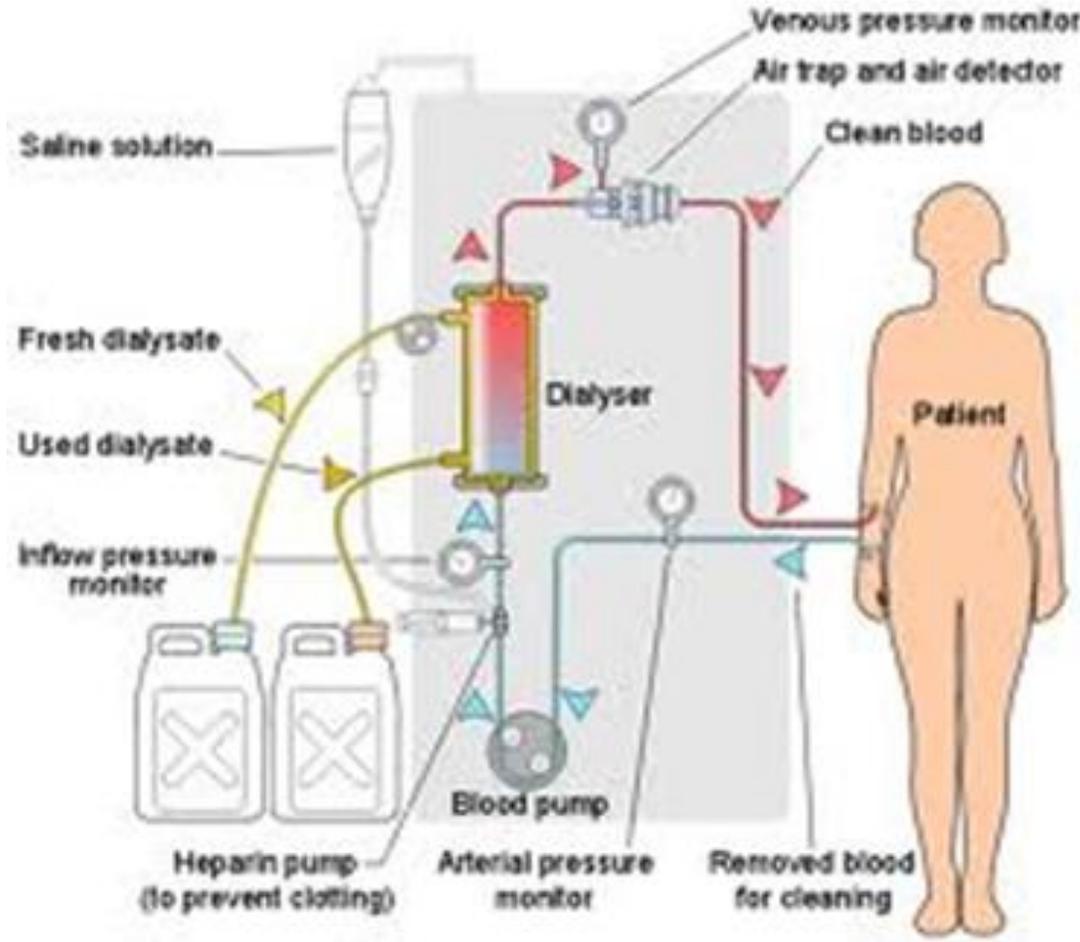
Examples: ethylene glycol, methanol, lithium, salicylates, and theophylline.

Complications: of HD

hypotension, bleeding, hypothermia, air embolus, infections.



بين شقوق الـ toxin حوزة نفس العويدة بسلايد [28]



Peritoneal dialysis

- It is too slow to be clinically useful.
- Used only when hemodialysis and hemoperfusion are unavailable.

~~*~~ in severe hypotension

~~*~~ fluid in abdomen
24 - 36 لتر.

concentration نقص تركيز ال

Antidote

- A therapeutic substance used to counteract the toxic action(s) of a specified xenobiotic.
- Classification :

According to mode of action

1- Physical

2- Chemical

3- physiological/ pharmacological

1- Physical Antidotes:

Agents used to interfere with poisons through physical properties, not change their nature

- a) Adsorbing: the main example is activated charcoal.
- b) Coating: a mixture of egg & milk makes a coat over the mucosa. It can be effective in corrosives, but not in cases of organophosphate. It decreases efficacy of AC.
- c) Dissolving: 10% alcohol or glycerine for carbolic acid

ما بعضی ای شی
خوباً صدانو بھول
vomiting
⇒ بس لو کافہ عمدہ اختیار نہ

2- Chemical Antidotes

a) Oxidizing: Amyl Nitrite is used in cyanide toxicity.

b) Reducing: Methylene Blue: it is used with MetHb producers: nitrates, nitrites, phenacetin, chlorates, sulfonamides.

Vitamin C: used for drugs causing Met-Hb.

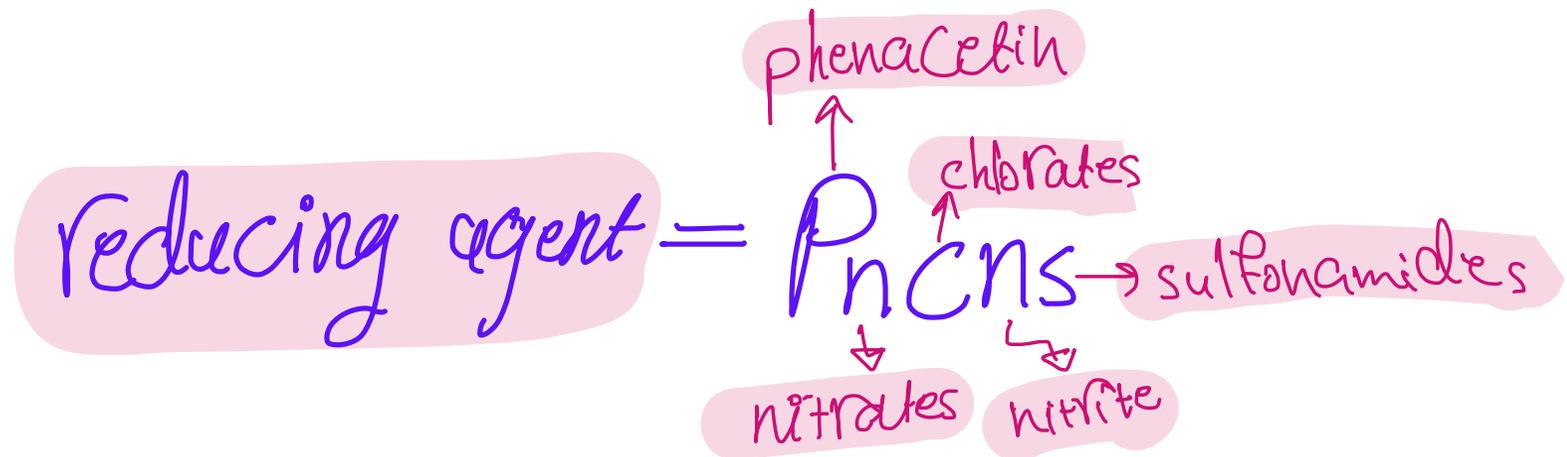
c) Precipitating: Starch: it makes blue precipitate with iodine. 50 gm in glass water.

metHemoglobinemia

affinity to ferric (metHb)

in cytochrom in mitochondria

Nitrite
metHb → Hb
cyanide و يرفع في حال
cytochrom ال



3- Physiological (Pharmacological) Antidotes:

a) Antagonism

1- ^{*}Competitive Antagonists as:

- Naloxone & Naltrexone : Opiate dependence; longer action with affinity for mu receptors.
- Flumazenil : antagonist for benzodiazepines
- Atropine : organophosphate & carbamate.



الفرق
Naloxone → IV in Emergency

Naltrexone → opioid antagonist but not used in Emergency • Long acting oral or IM used in addiction ✓

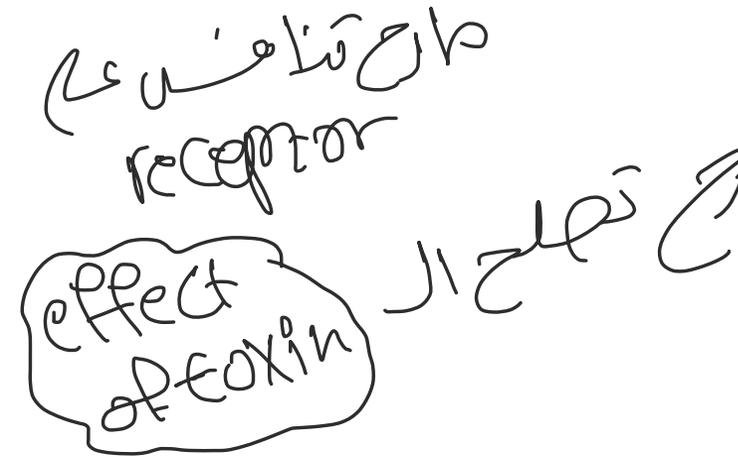
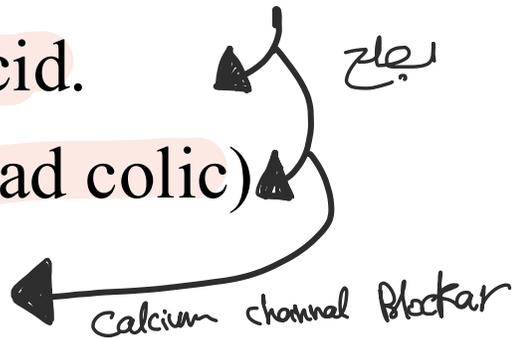
2- Non-competitive antagonists:

1. **Calcium gluconate:** used in

i. **Oxalic acid.**

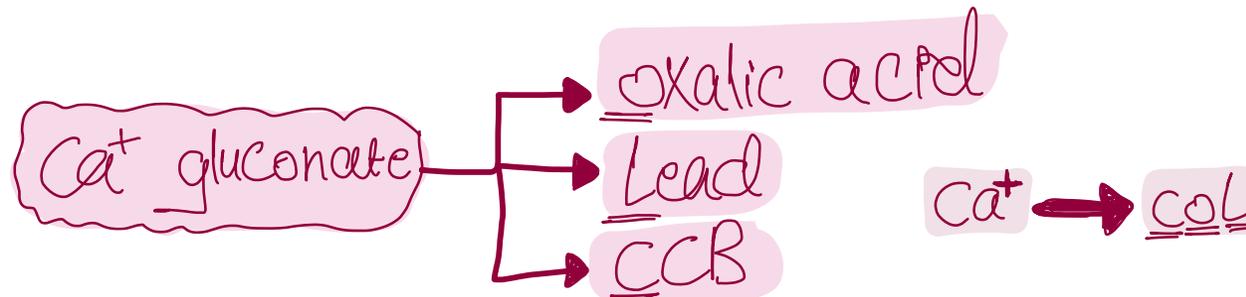
ii. **Lead (lead colic)**

iii. **CCB.**



2. **Pralidoxime:** in organophosphate toxicity

3. **Physiostigmine:** used in atropine overdose.



C- Chelating agents;

for heavy metal



Definition: These are chelating agents which combine with metals forming non toxic compounds that are rapidly excreted in urine.

1. **Ca (Na) 2 EDTA (calcium disodium ethylene diamine tetracetic acid):** Calcium disodium EDTA is used in Lead. The non calcium form of EDTA is used in digitalis toxicity. Disodium EDTA is used in digitalis poisoning. Dicobalt edta [Kelocyanor] is used in cyanide poisoning
2. **Penicillamine:** treat lead, mercury, zinc and copper
3. **Deferoxamine [Desferal]:** Used to treat iron toxicity.

D- Increase detoxification:

1. *N-acetyl cysteine (NAC, parvolex)*: for paracetamol
2. *100% oxygen*: for CO and cyanide.

E- Antibodies:

1. *Digoxin specific antibodies fragment (FAB fragment; digibind)*.
2. *Antisera*: used for snake, scorpion and botulism.

F- Other antidotes:

1. *Vitamin B1*: in alcoholic neuritis, alcohol.
2. *Vitamin B12 (hydroxy-cobolamin)*: for ~~cyanide~~.
3. *Folic acid*: used for methanol and ethylene glycols toxicity.



4. *Sodium bicarbonate*: Used in:
 - a- Correction of acidosis.
 - b- Forced alkaline diuresis.
 - c- TCA.
 - d- elimination of Hb in hemoglobinuria

5. *Methylene blue*: used for drugs causing met-Hb (e.g. Dapsone). *reducing agent*

6. *Nitrites (Amyl nitrite and sodium nitrite)*: Used in cyanide *alkalizing agent*

7. *Vitamin C*: used for drugs causing met-Hb. *reducing agent*

8. *Sodium thiosulphate*: Used in toxicity of cyanide.

1) 26 years old female ingested her father's pills.. antiplatelet drug.. in large doses and came to hospital after 6 hours.. the best management:

- A. forced alkaline diuresis
- B. emesis ← *خلص*
- C. hemodialysis ← *أبع الوقت*
- D. activated charcoal
- E. gastric lavage ←

Answer: a

2) 20-year-old man came with chronic constipation.. what's the poisonous material that he was exposed to?

- A. chronic lead toxicity ←
- B. paracetamol toxicity
- C. arsenic toxicity

Answer: a

3) Case.. flush.. non reactive dilated pupil.. most likely cause?

- A. organophosphorus
- B. alcohol
- C. atropine

Answer: c

4) Pinpoint pupil picture.. which of the following causes this condition?

- A. opiates
- B. pesticides
- C. cholinergic drugs

General toxicology من حافظه الـ

E. Pupil:

1. **Pin-pointed:** with opiates, OPI, phenothiazines and pontine lesions.
2. **Reactive dilated:** with sympathomimetics (amphetamine, cocaine).
3. **Non reactive dilated:** occurs with anticholinergics.

5) A patient came with decreased visual acuity.. what is the best treatment?

- A. ethanol.. fomepizole.. sodium bicarbonate ↓
- B. gastric lavage
- C. emesis
- D. activated charcoal

*في ميثانول
in methanol*

↓ Visual acuity = methanol toxicity

Answer: a

6) Which of the following is incorrect about naloxone:

- A. part of cocktail for coma
- B. diagnostic and therapeutic for coma cause
- C. may exacerbate opiate withdrawal manifestation
- D. pharmacological antagonist of opioids
- E. long acting opioid antidote

غالباً الجواب E ... لأنواعها short acting

Answer: d??

7) Match the following antidotes with the poisonings:

- | | |
|----------------------|---------------------|
| 1. Flumazenil | A. Oxalic acid |
| 2. Oximes | B. Benzodiazepine |
| 3. Atropine | C. Organophosphorus |
| 4. Calcium gluconate | D. Iron |
| 5. Deferoxamine | E. Carbamates |

*سيارة وقطار (انتولها ظهر)
بالهبة للصحة*

• Choose the correct matching:

- A. 1b 2c 3e 4a 5d
- B. 1c 2b 3a 4e 5d
- C. 1a 2e 3b 4c 5d
- D. 1b 2e 3c 4d 5a

Answer: a

8) Which is wrong?

- A. Benzodiazepine antidote is naloxone
- B. Flumazenil is benzodiazepine antidote
- C. Naloxone is opioid antagonist
- D. Atropine is antidote for organophosphates

Answer: a

9) 20-year-old female took 12 pills of paracetamol (Paramol). Which physician's opinion is correct?

- A. Physician A: No need to be admitted
- B. Physician B: Need to be admitted

Answer: b

10) What GI decontamination is done following ingestion of this substance: (CLOROX)?

- A. gastric lavage only
- B. emesis + gastric lavage
- C. activated charcoal

Answer: a

11) A comatose person came to the hospital due to swallowing too much amount of a non-tablet substance, which method of GI decontamination is preferred?

- A. Emesis only
- B. Emesis and gastric lavage
- C. Emesis, gastric lavage, and activated charcoal
- D. Activated charcoal only
- E. All the answers are false

Answer: d

12) All are contraindicated to have gastric lavage except:

- A. Hyperthermia
- B. Foreign body ingestion
- C. Coma
- D. Convulsion
- E. Corrosive

Answer: a

13) Which of the following are contraindications of gastric lavage?

- A. All of the above
- B. Only children less than 1 year old and comatose patients
- C. Only corrosives and convulsions

Answer: a

14) Mention 2 toxidromes caused by antidepressants:

- Serotonin toxidrome
- Anticholinergic toxidrome

20) plumbism : lead poisoning

21) SATS : History of toxicology *بمن المصنوقه*

22) All are competitive antagonists except??

- A. Atropine / nerve gases *X*
- B. Atropine / organophosphorus *✓*
- C. Naloxone / opioids *✓*
- D. Flumazenil / benzodiazepines *✓*
- E. Oximes / organophosphorus *✓*

Answer: a

23) Drug toxicity case with tachycardia and dry skin and non reactive dilated pupils

This case of ?

anticholinergic toxicity

E. Pupil:

1. Pin-pointed: with opiates, OPI, phenothiazines and pontine lesions.
2. Reactive dilated: with sympathomimetics (amphetamine, cocaine).
3. Non reactive dilated: occurs with anticholinergics.

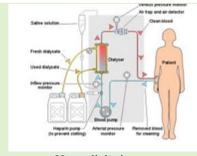
Name the picture and mention the indication



Salt and water كان برضو مكان مكتوب بالصورة *not use for emsis*



Orogastric tube كان مكتوب بالصورة عرفه gastric lavage. يستخدم وانكر مثال



Hemodialysis Indications: drugs that have the following criteria: Low molecular weight. Small volume of distribution. Low degree of protein-binding. High water solubility. تعريفه و مثال صح

اجابنا نفسه بالامتحان بس كان بده العلف منهم 8 -

- | | |
|------------------------|---------------------|
| 1. Flumazenil <i>B</i> | A. Oxalic acid |
| 2. Oximes | B. Benzodiazepine |
| 3. Atropine | C. OrganoPhosphorus |
| 4. Calcium gluconate | D. Iron |
| 5. Deferoxamine | E. Carbamates |

1b 2c 3e 4a 5d



powder كان فيه سؤال عن فانيش (دواء غسيل) كان بسال في حال طفل بلعه شو الاجر المناسب كان فيه خيارين محيرين AC الأول بنعطي الثاني gastric wash AC انا اخترت *وانا برضو بنعطي هيك*

17- 26 years old female ingested her father's pills (antiplatelet drug) in large doses and came to hospital after 6 hours , the best management:

- A) forced alkaline diuresis *✓*
- B) emsis
- C) hemodialysis
- D) activated charcoal
- E) gastric lavage

Answer: A

A comatose person came to the hospital due to swallow too much amount of a non-tablet substance, which method of GI decontamination is preferred?

- a- Emesis only *X*
- b- Emesis and gastric lavage *X*
- c- Emesis, gastric lavage, and activated charcoal *✓*
- d- Activated charcoal only *✓*
- e- All the answers are false

Contraindications of gastric lavage?

- 5. Children less than 1 year old *✓*
- 6. Comatose patients *✓*
- 7. Corrosives *✓*
- 8. Convulsions *✓*

كلمة

9) Pinpoint pupil picture: which of the following cause this condition?

- Opiates, pesticides, cholinergic drugs

16) A patient came with ... and decreased visual acuity. What is the best treatment?

- a. Ethanol, fomepizole, and sodium bicarbonate *✓*
- b. gastric lavage, emesis, activated charcoal

metanol toxicity

Answer: A

Which is wrong?

Benzodiazepine antidote is naloxone *X*

Ru 2

7) child ingested large amount of powder washing product, what is the best initial step?

(the options related to ways of decontamination and one of them was all of the above and I think it was the correct answer)

7. What GI decontamination is done following ingestion of this substance:

- A- gastric lavage only *X*
- B- emesis + gastric lavage *X*
- C- AC *✓*



2- All are contraindicated to have gastric lavage except:

- A- Hyperthermia
- B- foreign body ingestion
- C- coma
- D- Convulsion
- E- Corrosive

ANSWER : A

Reactive Dilated pupils is cocaine and amphetamine

in General toxicology



↓

E. Pupil:

1. **Pin-pointed:** with opiates, OPI, phenothiazines and pontine lesions.

2. **Reactive dilated:** with sympathomimetics (amphetamine, cocaine).

3. **Non reactive dilated:** occurs with anticholinergics.