

# POISONING



# INTRODUCTION

poisons are usually swallowed , but they can also be inhaled , splashed on to the skin or eyes , injected or received through a bite .many substance are only poisonous if an abnormally large amount is taken . poisoning accounts for more than 7,500 hospital admission in Ireland each year.

## DEFINITION

poisoning occurs when any substance interferes with normal body functions after it is swallowed , inhaled, injected or . The branch of medicine that deals with the detection and treatment of poisons is known as toxicology.

# INCIDENCE

World Health Organization estimated 0.3 million people die every year due to various poisoning agents . Acute pesticide poisoning is one of the most common cause of intentional deaths world wide.

# MODE OF ABSORPTION

- Ingestion
- Inhalation
- injection
- Splashing in to the eye
- Absorbed through the skin (Inunction)
- Insufflation (the act of blowing gas or a powder in to a body cavity)

# Routes of Poisoning

**Inhalation**



**Absorption**



**Injections**



**Ingestion**



# MAIN TYPES OF POISONS

- Acids
- Alkalies
- Medication
- Metal poisoning
- Organ phosphorous poisoning
- Petroleum products
- Oils

# ACIDS

- ❖ Nitric acids
- ❖  $H_2SO_4$
- ❖ HCL
- ❖ Carboic acid
- ❖ Acetic acid





# ALKALIES

- Drain cleaners
- Dishwashing – detergents, ammonia
- Bleaches

# MEDICATION

- ✓ Aspirin & Aspirin containing medications
- ✓ NSAIDS
- ✓ Hallucinogen
- ✓ Barbiturates
- ✓ Alcohol
- ✓ (in homeo treatment : spirit)

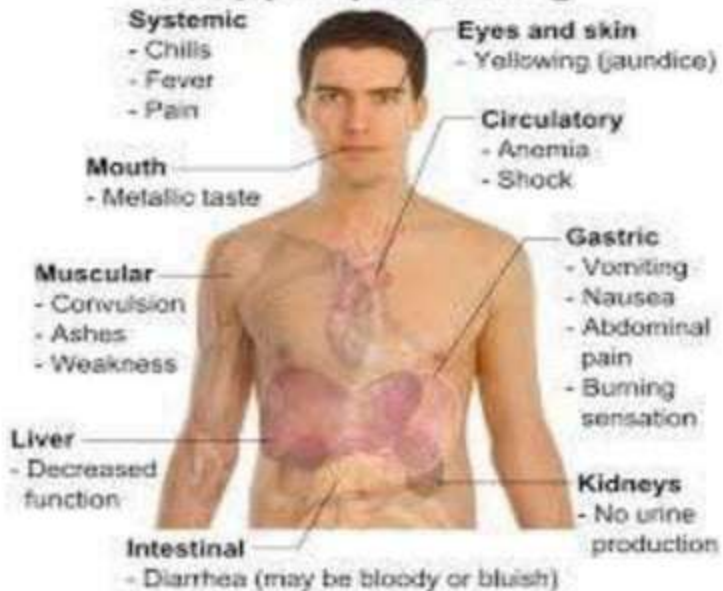
# METAL POISONING

- Iron
- Copper
- Cyanide
- Lead
- Ethylene glycol

# Arsenic poisoning



# Main symptoms of Copper poisoning



# Lead poisoning

*Lead buildup in the body causes serious health problems*



## Symptoms

- Headaches
- Irritability
- Reduced sensations
- Aggressive behavior
- Difficulty sleeping

- Abdominal pain
- Poor appetite
- Constipation
- Anemia

## Additional complications for children:

*Lead is more harmful to children as it can affect developing nerves and brains*

- ▶ Loss of developmental skills
- ▶ Behavior, attention problems
- ▶ Hearing loss
- ▶ Kidney damage
- ▶ Reduced IQ
- ▶ Slowed body growth

Source: MedlinePlus/Mayo Clinic

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# OP POISONING

- Insecticides naphthalene
- Pesticides
- Opium
- Castor oil
- Mushroom
- Tobacco
- Cannabis







## Insecticides & Herbicides



# GENERAL PRINCIPLES OF POISONING

- Acetaminophen Poisoning
- Aspirin and Other Salicylate Poisoning
- Carbon Monoxide Poisoning
- Caustic Ingestion
- Fish Poisoning and Shellfish Poisoning
- Hydrocarbon Poisoning
- Iron Poisoning
- Lead Poisoning
- Mushroom Poisoning
- Organophosphate Poisoning and Carbamate Poisoning
- Plant Poisoning
- Specific Poisons

## SIGNS AND SYMPTOMS

- **nausea**
- **vomiting**
- **diarrhea**
- **stomach pain**
- **drowsiness**
- **dizziness or weakness**
- **fever**
- **shivering**
- **loss of appetite**
- **headache**
- **difficulty swallowing**
- **producing more saliva than normal**
- **skin rash**
- **burns around the nose or mouth**
- **double or blurred vision**

# DIAGNOSTIC EVALUATION

- History (bystanders, patient is able/conscious if )
- Respiration and cyanosis
- Condition of skin
- Size of the pupil – small in OP poisoning and large in cocaine
- Smell near the patient and gastric content

# Management



## MEDICAL MANAGEMENT

### • Pharmacological management

- Atropine sulphate
- 1ml=0.6mg
- 5 ampule iv bolus
- Atropine infusion
- Atropinisation
  - delirium
  - restlessness
  - mydriasis (dilated and fixed pupil)
  - decreased secretion
  - fever, tachycardia, dryness of tongue
- Pralidoxime (PAM)
- 1-2gm IV stat
- Repeat every 8hoursit is most effective within 24 hours of consuming poison
- Antibiotics(prevent UTI and respiratory infection)
- H2 receptor antibiotics
- IV fluids Multivitamin

CONTI...

- Non pharmacological management

- Catheterisation, RT, establish patent airway
- IV line vascular access, gastric lavage
- Administration of activated charcoal orally or via gastric tube within 60 minutes of poison ingestion. Many toxins adhere to charcoal and excreted through GI tract rather than absorption in to the circulation



## BOWEL MANAGEMENT

- ❑ Cathartics (sorbitol) are given together with the first dose of charcoal to stimulate intestinal motility.
- ❑ Whole bowel irrigation involves the administration of bowel evacuant solution(eg : goly - tely).this solution is administered every 4-5hrs until stool are clear.
- ❑ It is effective for swallowed objects for cocaine filled balloon or condoms, and heavy metals such as lead and mercury

# NURSING MANAGEMENT

## □ Nurses responsibility

- Inform police
- Report MLC
- Collect information from the surrounding persons/bystanders
- Preserve the suspending material like bottle containing pills or liquid
- Preserve the vomited material.

CONTI...

□ Nursing diagnosis

1. delayed growth and development related to the effects of lead on the brain.
2. disorganized infant behaviour related to irritability and lethargy
3. Ineffective breathing pattern related to shortness of breath

CONTI...

□ Nursing intervention

- reduced lead exposure
- medication administration
- education
- remove lead containing materials

## PREVENTION

1. keep all household product in their original bottles.
2. lock up chemicals in a safe place.
3. never mix chemicals.
3. double check seals.
4. teach your children about dangers .
5. dispose of old medicine.

## SIDE EFFECTS OF POISONING

- ✓ feeling and being sick,
- ✓ diarrhoea,
- ✓ stomach pain,
- ✓ drowsiness,
- ✓ loss of appetite,
- ✓ headache,
- ✓ chills.

# COMPLICATION

- heart problem
- respiratory tract problem
- kidney and liver damage

## CONCLUSION

A poison is any substance that is harmful to your body . The effects of poisoning range from short term illness to brain damage ,coma and death . To prevent poisoning it is important to used and store product exactly as their labels say . Treatment for poisoning depend on the type of poison.





Thank  
you