

Update date: February 1, 2024

## Group No. 11: Poisoning

**ATROPINE**

| Clue            | Description   | Indications                                | Route of administration and dosage  |
|-----------------|---|--|---|
| 010.000.0204.00 | INJECTABLE SOLUTION<br><br>Each vial contains: Atropine sulfate 1 mg.<br><br>Container with 50 vials with 1 mL. | Insecticide poisoning by phosphorus organ. | Intramuscular, intravenous.<br><br>Adults:<br>2 mg every 20 to 30 minutes, until atropinization response is obtained.<br>Maximum dose 6 mg.<br>Children:<br>Initial: 0.05 mg/kg body weight, repeat every 10 to 30 minutes, for 3 doses.<br>Maintenance: 0.01 mg/kg body weight.<br><br>Maximum dose 0.25 mg. |

## Generalities

Anticholinergic alkaloid that competes at the level of cholinergic receptors, selectively antagonizing the effects of both acetylcholine and muscarinic cholinergic drugs.

Risk in Pregnancy b

## Adverse effects

Tachycardia, mydriasis, dry mucous membranes, blurred vision, excitement, mental confusion, constipation, urinary retention, urticaria.

## Contraindications and Precautions

Contraindications: Hypersensitivity to the drug. Glaucoma. Bladder obstruction, paralytic ileus, myasthenia gravis.

## Interactions

With antidepressants, antihistamines, meperidine, phenothiazines, methylphenidate and orphenadrine, the atropinic action is increased. Decreases the action of pilocarpine. Vitamin C promotes the elimination of atropine.

**ACTIVATED CARBON**

| Clue            | Description  | Indications  | Route of administration and dosage   |
|-----------------|--|--|--|
| 010.000.2242.00 | DUST<br><br>Each container contains:<br>Activated carbon 1 kg.<br><br>Container with one kg.<br>(for use in humans). | Intoxication by:<br><br>Acetaminophen.<br>Amphetamines.<br>Aspirins.<br>Barbiturate.<br>Glycosides cardiac,<br>Sulfonamides.<br>Heavy metals.<br><br>Organophosphate pesticides. | Oral.<br><br>Adults and children:<br>1gr/kg body weight /dose, every 4 hours for 24 hours.<br><br>Administer it concomitantly with cathartic (powdered magnesium sulfate, mannitol or sorbitol). |

## Generalities

It adheres to numerous medications and chemical compounds, inhibiting their absorption in the digestive tract. It is an adsorbent.

Risk in Pregnancy A

Adverse effects  
Nausea.

## Contraindications and Precautions

Contraindications: Hypersensitivity to the drug.  
Precautions: In semi-conscious or unconscious patients.

## Interactions

Acetylcysteine and ipecac decrease its adsorbent effect.

**PROTAMINE**

| Clue            | Description  | Indications          | Route of administration and dosage  |
|-----------------|--|----------------------|---|
| 010.000.0625.00 | INJECTABLE SOLUTION<br><br>Each 5 milliliter vial contains:<br><br>Protamine sulfate 71.5 mg.<br><br>Vial container with 5 mL. | Heparin overdose. by | Intravenous.<br><br>Adults and children:<br><br>The dose of protamine depends on the amount of heparin administered. One milligram of protamine neutralizes the anticoagulant effect of 80 to 100 units of heparin.<br><br>Dilute 50 to 150 mg of protamine in 100 mL of physiological saline solution, and administer slowly over one hour.<br><br>The dose of protamine should not exceed 50 mg in a period of 10 min.<br><br>Only administer diluted in intravenous solutions packaged in glass bottles. |

## Generalities

Protamine acts as an antagonist of heparin to which it binds by ionic combination, forming a complex and consequently inactivates it.

## Risk in Pregnancy b

## Adverse effects

Headache, lassitude, back pain, immediate hypersensitivity reactions.

## Contraindications and Precautions

Contraindications: Hypersensitivity to the drug.

Precautions: The risk of hypersensitivity should be taken into account, especially in patients with a history of sensitivity to fish, particularly salmon; in vasectomized patients who have developed antiprotamine antibodies and in diabetic patients who are being treated with protamine insulin.

## Interactions

None of clinical importance.

**NICOTINE**

| Clue            | Description   | Indications  | Route of administration and dosage  |
|-----------------|---|--|---|
| 010.000.0080.00 | CHEWABLE TABLET<br><br>Each chewable gum tablet contains:<br><br>20% Nicotine Resin Complex equivalent to 2.0 mg of nicotine.<br><br>Container with 30 chewable gum tablets | Adjuvant in the treatment to eliminate the habit of smoking. | Oral.<br><br>Adults:<br>Individual dose, according to the needs of each patient and at the discretion of the specialist doctor. |

## Generalities

Cholinergic tobacco alkaloid that is rapidly absorbed through the airways, oral mucosa and skin. It is used to maintain constant plasma concentrations of nicotine, lower than those obtained by the act of smoking, but sufficient to avoid or reduce cigarette withdrawal syndrome.

## Risk in Pregnancy d

## Adverse effects

Nausea, vomiting, salivation, abdominal discomfort, diarrhea, low blood pressure, headache, confusion, feeling of weakness.

## Contraindications and Precautions

Contraindications: Hypersensitivity to the drug.

Precautions: In cardiovascular diseases, acid-peptic disease, hyperthyroidism, renal failure and after myocardial infarction.

## Interactions

None of clinical importance.

**ACETYLCYSTEINE**

| Clue            | Description  | Indications  | Route of administration and dosage   |
|-----------------|--|--|--|
| 010.000.4326.00 | 20% SOLUTION<br><br>Each vial contains: Acetylcysteine<br>400 mg.<br><br>Package with 5 vials with 2 mL (200 mg/mL). | Paracetamol poisoning.<br>Bronchial processes with thick, very adherent expectoration. | Oral.<br><br>Adults and children:<br>Starting dose, 140 mg/kg body weight;<br>then 70 mg/kg body weight, each<br>4 hours, up to 18 doses or 72 hours.<br><br>Nasal nebulization.<br><br>Adults and children over 7 years old:<br>600 to 1000 mg/day divided into doses every 8 hours.<br><br>Children from 2 to 7 years:<br>300 mg/day divided into doses every 8 hours.<br><br>Children under 2 years:<br>200 mg/day divided into doses every 12 hours. |

## Generalities

Protects against the hepatotoxic effect produced by paracetamol overdose.

Risk in Pregnancy c

## Adverse effects

Immediate hypersensitivity reactions, nausea, vomiting, headache, chills, fever, rhinorrhea, diarrhea, bronchospasm.

## Contraindications and Precautions

Contraindications: Hypersensitivity to the drug. Mellitus diabetes. Gastroduodenal ulcer.

Precautions: Bronchial asthma, use of tetracyclines.

## Interactions

Antibiotics such as amphotericin, ampicillin sodium, erythromycin lactobionate and some tetracyclines are physically incompatible or can be inactivated by mixing with acetylcysteine.

**FLUMAZENIL**

| Clue            | Description  | Indications               | Route of administration and dosage  |
|-----------------|--|---------------------------|---|
| 040.000.4054.00 | INJECTABLE SOLUTION<br><br>Each vial contains: Flumazenil<br>0.5 mg.<br><br>Container with a vial with 5 mL (0.1 mg/mL). | Benzodiazepine poisoning. | Intravenous.<br><br>Adults:<br><br>0.3 to 0.6 mg, every 6 hours for 24 hours. |

## Generalities

It is an imidazobenzodiazepine derivative that acts as a competitive antagonist of benzodiazepines.

Risk in Pregnancy b

## Adverse effects

Anxiety, palpitations, fear.

## Contraindications and Precautions

Contraindications: Hypersensitivity to the drug.

## Interactions

It blocks the central effects of benzodiazepines, through competitive interaction at the receptor level.

**METHYLTHIONINE CHLORIDE (Methylene blue)**

| Clue            | Description  | Indications  | Route of administration and dosage   |
|-----------------|--|--|--|
| 010.000.2231.00 | INJECTABLE SOLUTION<br><br>Each vial contains:<br>Methylthionine chloride trihydrate<br>100 mg.<br><br>Container with 1 vial with 10 mL. | Agent poisoning<br>methemoglobinizing: Aniline.<br><br>Nitrobenzene,<br>Acetophenetidine.<br>Bromates.<br>Fluorates.<br>Hydroquinone.<br>Organic nitrates. | Intravenous.<br><br>Adults and children:<br><br>1 mg/kg body weight/dose, every 6 hours.<br><br>Without exceeding three doses, in severe<br>methemoglobinemia. |

**Generalities**

Antidote with oxidation-reducing properties, which oxidizes iron and converts the ferrous form of reduced hemoglobin into the ferric form.

**Risk in Pregnancy** to**Adverse effects**

Nausea, lipothymia, vomiting, chest pain, sweating.

**Contraindications and Precautions**

Contraindications: Hypersensitivity to the drug. Cyanide poisoning. Congenital methemoglobinemia.  
 Precautions: Paradoxical response in overdose, may cause an increase in methemoglobin. The treatment for methemoglobinemia secondary to methylene blue is exsanguineous transfusion and ascorbic acid.

**Interactions**

They have not been reported to date.

**NALOXONE**

| Clue            | Description  | Indications       | Route of administration and dosage   |
|-----------------|--|-------------------|--|
| 040.000.0302.00 | INJECTABLE SOLUTION<br><br>Each vial contains: Naloxone<br>hydrochloride 0.4 mg.<br><br>Container with 10 vials with 1 mL. | Opiate poisoning. | Intramuscular, intravenous, subcutaneous.<br><br>Adults:<br>0.4 to 2 mg every 3 minutes, until the therapeutic effect<br>is obtained. Maximum dose 10 mg/day.<br><br>Children:<br>0.1 mg/kg body weight/dose. Apply doses every 3<br>minutes, until obtaining a clinical response. |

**Generalities**

Competitive antagonism with previously administered narcotic analgesics. It has no pharmacological activity by itself.

**Risk in Pregnancy** b**Adverse effects**

Systemic arterial hypotension, tachycardia, nausea, vomiting, diaphoresis, fasciculations, pulmonary edema, irritability.

**Contraindications and Precautions**

Contraindications: Hypersensitivity to the medication.

**Interactions**

None of clinical importance.

**NEOSTIGMINE**

| Clue            | Description   | Indications                  | Route of administration and dosage   |
|-----------------|---|------------------------------|--|
| 010.000.0291.00 | INJECTABLE SOLUTION<br><br>Each vial contains: Neostigmine<br>methyl sulfate 0.5 mg.<br><br>Container with 6 vials with 1 mL. | Antimuscarinic poisoning. by | Intravenous.<br><br>Adults:<br>0.5 to 2 mg, until clinical response is obtained.<br>Maximum dose: 5 mg/day.<br><br>Children: |

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| 0.07 to 0.08 mg/kg body weight, until clinical response is obtained. |
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| Generalities |
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It inhibits the hydrolysis of acetylcholine by competing with it for acetylcholinesterase.

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| Adverse effects |
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Abdominal pain, diarrhea, nausea, increased peristalsis, hypersalivation, headache, bronchospasm, arterial hypotension, fasciculations, dysarthria, drowsiness.

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| Contraindications and Precautions |
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Contraindications: Hypersensitivity to the drug. Mechanical intestinal or urinary obstruction. Pyloric stenosis.

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| Interactions |
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With atropine, anticholinergic agents, procainamide, aminoglycosides, and quinidine, cholinergic effects in muscle can be reversed.

## PENICYLAMINE

| Code            | Description  | Indications   | Route of administration and dosage   |
|-----------------|--|---|--|
| 010.000.2202.00 | <p>TABLET</p> <p>Each tablet contains:<br/>Penicillamine 300 mg.</p> <p>Package with 50 tablets.</p> | <p>Intoxication by:<br/>Copper.<br/>Lead.<br/>Mercury.<br/>Thallium.</p> <p>Wilson's disease.<br/>Cystinuria.<br/>Rheumatoid arthritis.</p> | <p>Oral.</p> <p>Adults:<br/>500 to 1500 mg/day, for 10 days, in poisoning.</p> <p>Children:<br/>30 to 40 mg/kg body weight/day, for 10 days.</p> |

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| Generalities |
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Chelating antidote to heavy metals, with which it forms stable and soluble complexes that are more easily excreted through urine.

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| Adverse effects |
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Immediate hypersensitivity reactions, anorexia, nausea, vomiting, epigastric pain, diarrhea, dyspepsia.

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| Contraindications and Precautions |
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Contraindications: Hypersensitivity to the drug.

Precautions: Do not administer together with gold salts, antimalarials, immunosuppressants or phenylbutazone, because it may cause serious renal and hematological adverse reactions.

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| Interactions |
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None of clinical importance.