

Checklist

The First 5 Minutes

of Toxicological Resuscitation

For most patients, basic concepts of Advanced Cardiac Life Support apply. Clinical judgement applies and may alter management.

Consider Personal Protective Equipment

- Wear protective equipment appropriate to the situation
- External decontamination as required (shower or water irrigation preferred)
- Sedate agitated patients

Document the exposure (obtain the chemical label if possible) and consider non-toxicological causes

A Airway

General Interventions

- Suction secretions and support the airway (jaw thrust/chin lift)
- Consider endotracheal intubation

Specific Interventions

- **Caustics**: Consider early intubation (avoid nasogastric tube placement)

B Breathing

General Interventions

- Measure respiratory rate and oxygen saturation
- Auscultate the lungs
- Supplement oxygen as needed
- Obtain chest X-ray as needed
- Endotracheal intubation as needed
- Treat bronchospasm if present

Specific Interventions

- **Metabolic acidosis**: Consider hyperventilation for intubated patients
- **Carbon monoxide**: Measure COHb and administer high flow oxygen
- **Opioids**: Administer naloxone in the presence of respiratory depression
- **Methemoglobin-producing agents (cyanosis, oxygen-refractory desaturation, normal CRX)**: Measure metHb and consider methylene blue

C Circulation

General Interventions

- Measure heart rate and blood pressure
- Install a cardiac monitor
- Obtain two large IV accesses (consider IO if venous access not available)
- Provide volume repletion, and consider vasopressors or inotropes as needed
- Obtain ECG for all patients
- Perform bedside cardiac ultrasound as needed
- Screen for coagulopathy and treatment if present
- Avoid amiodarone for arrhythmias in suspected intoxications

Specific Interventions

- **Beta-blockers or calcium channel blockers**: Refer to respective algorithm
- **Digoxin or digitalis derivatives**: Consider administration of digoxin-specific antibodies
- **Sodium channel blockers (QRS \geq 120 mms)**: Consider Na⁺ bicarbonate boluses
- **Potassium channel blockers (QTc \geq 500 ms)**: Consider MgSO₄ and avoid hypokalemia and hypocalcemia
- **Sympathomimetics (e.g. cocaine) with narrow complex tachycardia**: Administer benzodiazepines for agitation and avoid beta-blockers
- **Beta-agonists, methylxanthines (e.g. caffeine, theophylline) or halogenated hydrocarbons (e.g. dust extractor) with narrow complex tachyarrhythmia**: favor short-acting beta-blockers (e.g. esmolol)
- **Halogenated hydrocarbons (e.g. dust collector)**: Avoid epinephrine and norepinephrine
- **Cyanide**: Administer hydroxocobalamin

D Disability (neurologic)

General Interventions

- Measure capillary glucose
- Assess level of consciousness and pupils (symmetry, diameter and responsiveness)
- Evaluate muscle tone, reflexes and the presence of clonus
- Treat hypoglycemia if present
- Treat seizures with benzodiazepines (avoid using phenytoin in suspected intoxications)

Specific Interventions

- **Malnourished or alcoholic patients**: Administer thiamine
- **Isoniazid, Gyromitra mushrooms, or hydrazine**: Administer pyridoxine if seizures occur
- **Salicylates with altered mental status**: Administer dextrose

E Exposure

- Measure rectal temperature
- Be aware of peculiar odours
- Assess the skin (redness or pallor, skin lesions, signs of injection drug use, armpits for sweating or dryness, etc.)
- **Body packing or stuffing**: Obtain a flat plate abdominal x-ray, perform a digital rectal and vaginal exam for drug packets
- **Hyperthermia**: Target a rectal temperature $<$ 38.5°C (external cooling, benzodiazepines if shivering, etc.)
- **Hypothermic Patient**: Warm the patient as recommended by the ACLS

Initial toxicological blood work

- CBC
- Sodium, Potassium, Chloride
- Calcium, Magnesium, Phosphorus
- BUN, Creatinine, Glucose, Lactate, Creatine Kinase
- Serum osmolality
- Serum ethanol level
- Blood gas concentration
- Anion and osmolar gap (calculated)
- Liver panel
- INR
- Serum acetaminophen concentration
- Serum salicylate concentration

Other levels to consider

- Lithium
- Digoxin
- Phenytoin
- Carbamazepine
- Valproic acid
- Phenobarbital
- Serum iron
- COHb
- MetHb

F Foley

- Look for a distended bladder
- Install a urinary catheter as needed

G Gastric

- Assess for bowel sounds and evaluate for signs of peritonitis
- Install a nasogastric or orogastric tube as needed (except in the presence of a caustic ingestion)
- Gastrointestinal decontamination, as needed, in the absence of contraindications
- **Suspicion of GI perforation**: Obtain a flat plate abdominal x-ray and consider CT scan and/or general surgery consultation

Quebec Poison Control Centre is available at all times:

1 800 463-5060

If patient is clinically unstable, please mention it at the beginning of the call

Centre intégré universitaire de santé et de services sociaux de la Capitale-Nationale

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