

CYANIDE

NOTES ON CYANIDE

BACKGROUND:

Cyanide (CN) is an extremely toxic compound which is widely used in industry in a variety of forms (gas, liquid, solid). Cyanide gas (HCN) is a major toxic component in cases of smoke inhalation. CN produces toxicity by interfering with cellular oxygen utilization. Symptoms and signs include headache, dizziness, vomiting, tachypnea, tachycardia, and coma. There may be a distinctive odor ("bitter almonds") on the victim's clothing or breath. Death can occur within minutes of exposure. If exposure is by inhalation of CN gas, peak toxic effects are seen within minutes, but after ingestion of a CN salt or nitriles and other compounds that can be metabolized to form CN, the onset of symptoms may be delayed for several hours.

INITIAL DECONTAMINATION PRIOR TO PREHOSPITAL MANAGEMENT:

Decontamination should include flushing of the victim with water spray, and if gas is likely to be trapped in clothing, clothes should be removed and double bagged.

POTENTIAL FOR SECONDARY CONTAMINATION:

If the exposure was by inhalation of HCN gas, even though there may be small amounts of gas trapped in clothing after an overwhelming exposure, this is not usually sufficient to create a hazard for health care personnel away from the scene. The risk of secondary contamination to rescuers is greater if there is liquid or solid material on the victim's clothing or skin. Victims who have ingested cyanide salts or nitriles may vomit toxic material. This vomitus may off-gas HCN gas produced by the action of stomach acid on the material. Be prepared to contain the vomitus.

PREHOSPITAL MANAGEMENT AFTER INITIAL DECONTAMINATION:

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FORMS: Colorless to pale yellow gas (hydrogen cyanide), liquid (solutions of cyanide salts), and solid (cyanide salts). Hydrogen cyanide gas may be formed when acid is added to a cyanide salt or a nitrile.

- Evaluate Airway *
- Oxygen – High Flow/NRM
- Cardiac Monitor
- IV tko
- Transport

BASE

* Intubation should be considered if the victim develops severe respiratory distress.