Sodium Hydroxide

FORMS: **A caustic agent** found as solids in pellets, flakes, lumps or sticks and liquid. Used as an acid neutralizer in petroleum refining, in cleaning agents, paint removers, solvents and in water treatment processes. Part of the manufacturing process of cellulose, paper, textiles and plastics.

ROUTES OF EXPOSURE: Skin and eye contact, inhalation, ingestion

TARGET ORGANS: *Primary* – Skin, eyes, respiratory system, gastrointestinal system
Secondary – Central nervous system, cardiovascular system

LIFE THREAT: Severe tissue irritant that may cause upper airway burns and edema, pulmonary edema and skin burns. May cause GI perforation, hemorrhage and peritonitis leading to circulatory collapse.

SIGNS AND SYMPTOMS:

Cardiovascular: Tachycardia, hypotension and shock.

Respiratory: Dyspnea, tachypnea, sneezing, coughing, stridor, burns, upper airway edema and pulmonary edema.

CNS: Apathy, mental confusion, blurred vision and tremors.

Gastrointestinal: Nausea, vomiting, hemorrhage, perforation, abdominal pain, painful swallowing, profuse salivation, and burns to the mouth, esophagus, stomach and gastrointestinal tract may occur.

Eye: Chemical conjunctivitis, corneal ulceration, severe scarring, permanent blindness.

Skin: Deep tissue chemical burns, skin rash (in milder cases), cold and clammy skin with cyanosis or pale color.

Symptom Onset for Acute Exposure:
Immediate. Some symptoms such as pulmonary edema, GI perforation and cardiovascular collapse possibly delayed.

Procedure:

Pre-Radio Contact

1. Follow General HazMat Treatment protocol.
2. Watch for signs of pulmonary edema and shock.
3. Do not attempt to neutralize **with an acid** because of exothermic chemical reaction.
4. **Dilute ingestions orally with water in alert patient.**
5. **Remove clothing for liquid dermal exposure – rapid body wash with water.**

Aggressive airway management may be necessary!

6. Oral tracheal or nasal tracheal intubation for airway control in the patient with **respiratory distress due to upper airway turns,** unconscious or in respiratory arrest.
7. Start IV NS if hypotensive.

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General Treatment

8. Refer to HazMat Eye Irrigation protocol for eye exposure.

9. Pain may be treated per the Pain Management Protocol.