**To: Physicians, Nurses, and Other Health Care Providers**

**From: The Education Team at the Nebraska Poison Center**

**Subject:** **Bleach Update**

**Date: August 2024**

Household bleach (sodium hypochlorite) exposure is a common reason for calls to the Nebraska Poison Center.  Here is information on treating hypochlorite exposures in the Emergency Department.

Household bleach typically contains 4% to 6% sodium hypochlorite and up to 0.5% sodium hydroxide with a pH between 11 and 12.  At these concentrations, bleach acts primarily as a mucosal irritant with ingestion resulting in a burning sensation of the mouth/throat, nausea and vomiting.

Ingestion of large amounts (usually >5 mL/kg) or 150 to 200 mL of 3% to 6% sodium hypochlorite solution or more concentrated industrial strength bleach may result in caustic injuries to the GI tract or upper airway. Injuries may include mouth burns, esophagitis, dysphagia, and severe metabolic disturbance.

Mixing bleach with acid or ammonia can produce chlorine or chloramine gases. Both gases are mucosal and pulmonary irritants that can result in bronchospasm as well as delayed pneumonitis (24 hours or longer after exposure).

TREATMENTS

* Initial treatment for ingestions is dilution with water (up to 120 mL for children or 240 mL for adults).
* Endoscopy should be considered for symptoms such as drooling, dysphagia, or severe pain as these suggest more severe caustic injury.
* Monitor respiratory status and vital signs.  Electrolytes should be checked for large ingestions.

* Ocular exposures call for copious saline irrigation and conjunctival pH evaluation, followed by another check of conjunctival pH 30 min after irrigation is completed.

* Following dermal exposure, contaminated clothing should be removed, and the skin washed thoroughly.
* Following exposure to chlorine or chloramine gases, respiratory status, including pulse oximetry, should be monitored and patients should be given bronchodilators and supplemental oxygen as needed.

**Registered Nurses and Pharmacists are available 24/7, and consultation with a toxicologist is available by request.**

