

**REGION I EMERGENCY MEDICAL SERVICES
STANDING MEDICAL ORDERS
BLS**

SMO: Botulism

Revised Date:

Overview: Botulism toxin is a neurotoxin produced by *Clostridium botulinum*, an anaerobic gram-positive bacillus, and is the most potent toxin known to humans. The toxin inhibits release of acetylcholine and can produce a profound flaccid paralysis. Death usually results from hypoxia secondary to respiratory muscle paralysis. Wound botulism is the second most common form reported to the CDC with food botulism the least commonly reported. Inhalational exposure to botulinum toxin also is possible. A bioterrorist incident may involve food-borne exposure, but inhalational exposure is the most likely form of exposure in a malicious attack. Botulism cannot be transmitted from person to person.

• Incubation periods

- Infant botulism, 2 to 4 weeks
- Food-borne exposure: GI tract symptoms usually occur first, beginning 18 to 36 hours after ingestion. Neurologic symptoms may develop 12 to 36 hours after ingestion, with the cranial nerves usually affected first
- Wound botulism: The incubation period is 4 to 14 days. Neurologic symptoms may occur hours after exposure
- Inhalational exposure: Neurologic symptoms may occur 24 to 72 hours after aerosol exposure

The local health department and the Illinois Department of Public Health must be notified of any suspected cases.

INFORMATION NEEDED

- History related to the presenting condition of the patient
- Open wounds present
- Facial paralysis
- Food ingestion during the last two days

OBJECTIVE FINDINGS

- **Infant:** Onset ranges from insidious to abrupt. First signs of the illness are in the cranial nerves. The weakness increases over 1 to 4 days. Generalized lack of muscle tone, listlessness, lethargy and poor feeding soon occur. Descending paralysis is symmetrical. The typical patient has an expressionless face, feeble cry and poor head control. The gag, suck and swallow reflexes are impaired, as well as the corneal reflex, if tested repetitively
- **Food-borne:** Nausea and vomiting seen early in the course of the disease followed by symmetrical cranial neural signs (e.g., drooping of the eyelids, double vision, blurred vision, dilation of the pupil, sore throat, difficulty swallowing, difficulty or pain in speaking) and descending weakness and paralysis, including involvement of respiratory muscles with respiratory distress leading to respiratory failure. Patients typically are without a fever and do not have an altered level of consciousness

- **Wound: Same and food-borne but without the gastrointestinal symptoms**
- **Inhalational: Same as food-borne but without the gastrointestinal symptoms**

BLS

- Standard isolation techniques to be used by EMS personnel
- Assess the patient for any other medical or trauma issues
- Vital signs including temperature
- Assess respiratory effort and airway patency
- Provide supplemental oxygenation with a nasal cannula at 2-6 LPM or non-rebreather mask at 10-15 LPM
- Assist ventilations as needed due to potential for respiratory paralysis
- CombiTube insertion may be needed to assist in ventilating the patient
- Suction as needed

Documentation of adherence to protocol:

- History related to the incident
- Assessment of respiratory effort, including any paralysis of the respiratory muscles
- Oxygen provided

Medical Control Contact Criteria

- Contact Medical Control if there is any suspicion of botulism exposure by the patient

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- Vital signs including temperature
- Assess respiratory effort and airway patency
- Provide supplemental oxygenation with a nasal cannula at 2-6 LPM or non-rebreather mask at 10-15 LPM
- Assist ventilations as needed due to potential for respiratory paralysis
- Endotracheal intubation or CombiTube may be needed to assist in ventilation of the patient
- IV of N.S.
- Suction as needed

Documentation of adherence to protocol:

- History related to the incident
- Assessment of respiratory effort, including any paralysis of the respiratory muscles
- Oxygen provided
- Airway measures taken

Medical Control Contact Criteria

- Contact Medical Control if there is any suspicion of botulism exposure by the patient