



County of Santa Cruz

HEALTH SERVICES AGENCY

POST OFFICE BOX 962, 1080 EMELINE AVENUE SANTA CRUZ, CA 95061-0962
(831) 454-4000 FAX: (831) 454-4488 TDD: Call 711

PUBLIC HEALTH DIVISION

PUBLIC HEALTH ALERT Wound Botulism Associated with Drug Injection

To:	All Healthcare Providers
From:	Lisa B. Hernandez, MD, MPH, Health Officer County of Santa Cruz
Date:	June 3, 2016
Subject:	Wound Botulism Associated with Drug Injection

INFORMATION

Since May 29, 2016, two highly suspect cases of wound botulism associated with heroin injection (potentially black tar heroin) have been reported in Santa Cruz County. The two hospitalized cases are apparently unknown to each other and presented with wound infections and a recent history of injecting heroin. Symptoms included diplopia, bilateral ptosis, extraocular palsy, slurred speech, dysphagia, and generalized weakness. The patients were treated with botulism antitoxin released by the California Department of Public Health (CDPH). The sources of the botulism remain unknown and additional cases may occur.

General signs and symptoms of wound botulism may include, diplopia, blurred vision, ptosis, dysarthria, dysphagia, dry mouth and muscle weakness. If untreated, these symptoms may progress to cause paralysis of the respiratory muscles, arms, legs and trunk. The incubation for wound botulism is difficult to estimate because exposure oftentimes cannot be reliably ascertained.

Supportive care is the mainstay of treatment for wound botulism. To reduce the incidence of respiratory failure, the botulism antitoxin should be administered as early as possible, prior to wound debridement, and ideally within 12 hours of presentation. Antibiotics are also recommended. More information about botulism and guidance for clinicians are available on the Centers for Disease Control and Prevention (CDC) botulism website <http://www.cdc.gov/botulism/testing-treatment.html>.

Santa Cruz County health care providers are requested to do the following:

1. Be alert for suspect cases of wound botulism, especially in injection drug users.
2. Immediately report suspect cases to the Communicable Disease Unit (phone: at (831) 454-4114; fax: (831) 454-5049 (Mon-Fri 8-5) or after hours at (831) 471-1170 and ask for the Health Officer on-call.) Santa Cruz County Public Health Communicable Disease Unit staff (CDU) must facilitate release of botulism antitoxin from CDPH.
3. Conduct a thorough search for wounds when examining patients with a history of injection drug use.
4. Consider prompt neurology, infectious disease, and surgical consultation as indicated.
5. Obtain pre-antitoxin serum for toxin assays (in serum separator tubes). Specimens to be sent to County of Santa Cruz Public Health Laboratory after consultation with the CDU.

6. Warn patients who inject drugs, particularly black tar heroin, about the risk of wound botulism and other potentially life-threatening infections and conditions associated with drug use. Cooking or cleaning the drug will not prevent botulism infection.
7. Educate patients about the symptoms of wound botulism and advise them to go to the nearest emergency department should symptoms develop. For fact sheet go to: <https://www.cdph.ca.gov/HealthInfo/discond/Documents/Botulism.pdf>.
8. Due to their higher risk for tetanus, patients who inject drugs should receive tetanus vaccine every 5 years.

A checklist developed by CDPH is available to health care providers relating to the diagnosis and management of wound botulism. A modified version of the checklist is attached to this alert (see next page). Providers are strongly encouraged to use this checklist when managing patients suspected to have wound botulism.

Health Alert: conveys the highest level of importance; warrants immediate action or attention.

Health Advisory: provides important information for a specific incident or situation; may not require immediate action.

Health Update: provides updated information regarding an incident or situation; unlikely to require immediate action.



Public Health
Prevent. Promote. Protect.

Santa Cruz County

CHECKLIST: DIAGNOSIS AND MANAGEMENT OF WOUND BOTULISM

Diagnosis

- Establish the presence of signs and symptoms consistent with the descending paralysis of botulism. *Did the symptoms begin with cranial nerve palsies (ptosis, diplopia, dysarthria) and progress distally?*
- If the diagnosis is in doubt, consider an infectious diseases consult, a neurology consult, and/or EMG testing which should show augmentation of muscle action potential at 20-50 Hz.
- Determine if the patient has risk factors for wound botulism. *Is the patient an injecting drug user, especially a person who skin-pops black tar heroin?*
- Look for infected wound(s). Some patients with wound botulism may not have an obvious site of infection.

Obtaining antitoxin

- Call the County of Santa Cruz Communicable Disease Unit at (831) 454-4114 (after hours (831) 471-1170 ask for on-call Health Officer) who must facilitate release of botulism antitoxin.
- Receive call from the California Department of Public Health (CDPH) Division of Communicable Disease Control Duty Officer (CDPH, DOD) who will discuss the case and release of antitoxin.
- Alert the hospital pharmacy that antitoxin is being released from one of the CDC Quarantine Stations and they will be contacted to facilitate transportation of the medication.
- Arrange for the transport of antitoxin (the admitting hospital is responsible for transport).

Required pre-antitoxin administration laboratory testing

- Draw 30 cc's of whole blood into red top tubes (this will take more than one tube).
- Label each tube with the patient's name, "pre-antitoxin serum," and the date and time of collection.
- Bundle the tubes.
- Indicate if the patient is taking any of the following interfering medications: neostigmine bromide, neostigmine methyl sulfate, pyridostigmine bromide, edrophonium chloride, or ambenonium chloride.
- Send the tubes to the hospital laboratory with instructions to refrigerate and ship to the Santa Cruz County Public Health Laboratory after CDU approval.

Antitoxin administration

- The only antitoxin currently available is the BAT [Botulism Antitoxin Heptavalent (A, B, C, D, E, F, G) – (Equine)]. It is a mixture of immune globulin fragments indicated for the treatment of symptomatic botulism following documented or suspected exposure to botulinum neurotoxin serotypes A, B, C, D, E, F, or G in adults and pediatric patients. The package insert which includes information on dosage and administration, and how to report adverse events is also included on this site.

Wound debridement

- Debride the patient's wound(s) if any. (CDPH recommends hanging antitoxin prior to wound debridement.)

Other considerations

- Treat with high-dose antibiotics effective against anaerobes.
- Vaccinate against tetanus if not up to date.

Post antitoxin laboratory testing

This is no longer done routinely as the amount of antitoxin is generally much more than needed to neutralize the circulating toxin. If the patient does not respond to antitoxin or has an exacerbation of symptoms consider whether there may be an ongoing source of toxin such as an ongoing infection or abscess. Repeat toxin testing can be considered on a case by case basis. Please consult Santa Cruz County Communicable Disease Unit.