



To: CAHAN San Diego Participants

Date: September 30, 2022

From: Public Health Services

Health Alert: Wound Botulism Associated with Black Tar Heroin

Key Messages

- Epidemiologically linked cases of wound botulism have been identified in two San Diego County adults in the last week.
- Providers should be on the alert for wound botulism among people who inject drugs, especially black tar heroin.
- Suspect cases should be immediately reported to the Epidemiology Unit at 619-692-8499 (Mon-Fri, 8 AM to 5 PM) or after hours and County-observed holidays at 858-565-5255.
- See recommendations on treatment and management, including use of Botulism Antitoxin Heptavalent (BAT®).

Situation

In the last week, one probable and one highly suspect case of wound botulism associated with black tar heroin injection have been reported in San Diego County. Black tar heroin is a crudely processed form of heroin, often adulterated with other substances or intermediate products, and depending on method resembling sticky tar, hard coal or a variably colored powder. The cases presented with wound infections or abscesses and a recent history of skin-popping black tar heroin. Other symptoms included dry mouth, ptosis, slurred speech, decreased neck flexion and generalized weakness. Both patients were admitted and treated with [BAT®](#) released by the California Department of Public Health (CDPH). One required intensive care treatment due to respiratory failure requiring intubation.

The sources of the black tar heroin remain unknown and additional cases may occur. Clusters of wound botulism cases associated with black tar heroin injection have occurred in Southern California in the past, including cases in San Diego County in 2010 (5 cases) and [2017-2018](#) (3 and 6 cases, respectively).

Background

Botulism is a rare and potentially fatal illness caused by the neurotoxin produced by *Clostridium botulinum* and rarely by other *Clostridium* species. Wound botulism is commonly associated with injection drug use and black tar heroin, and has been associated with multiple clusters of botulism cases in San Diego County. Prompt clinical diagnosis of botulism is imperative, as is timely administration of BAT®. To reduce the incidence of respiratory failure, the botulism antitoxin should be administered as early as possible, prior to debridement in wound botulism, and ideally within 12 hours of presentation. Antibiotics are also recommended to treat wound botulism. A checklist developed by the Epidemiology Unit guiding the diagnosis and management of wound botulism is attached.

Actions Requested

For Wound Botulism

1. Be alert for suspect cases of wound botulism, especially in people who inject drugs.
2. Immediately report suspect cases to the Epidemiology Unit at 619-692-8499 (Mon-Fri, 8 AM to 5 PM) or after hours and County-observed holidays at 858-565-5255. Epidemiology Unit staff can facilitate release of botulism antitoxin from CDPH.
3. Consider prompt neurology, infectious disease, and surgical consultation as indicated.
4. Obtain pre-antitoxin serum for toxin assays (in serum separator tubes). Instructions for specimen collection and submission are attached to this alert, and they may also be found [here](#). Note that Epidemiology Unit approval for testing must be obtained prior to specimen submission.
5. Educate 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. Additional information for patients is available [here](#).
6. Educate patients about the symptoms of wound botulism and instruct them to go to the nearest emergency department should symptoms develop. A patient directed flyer is attached to this advisory and also [here](#).

For Routine Care of People Who Inject Drugs

- As a general approach, use harm reduction strategies to engage and build trust with patients, including sharing information on how to access syringe services, naloxone, and effective treatment. Learn more about harm reduction principles [here](#).
- Patients in need of behavioral health resources can call the Access and Crisis Line at (888) 724-7240, 9-8-8 or 2-1-1; patients with opioid use disorder should be offered evidenced-based treatments, including medication-assisted treatment (e.g., buprenorphine, methadone) whenever possible.
- Offer naloxone to patients, and education about how to use and access it; prescribe or dispense naloxone directly to patients whenever possible; patients can also learn how to access naloxone by calling 2-1-1.
- Ensure immunizations are up to date for hepatitis A and B, and screen patients for hepatitis C and HIV.
- Ensure tetanus boosters are given every five years due to the increased risk for tetanus.

Resources

[Botulism Homepage | CDC](#)

[Wound Botulism Outbreak Among Persons Who Use Black Tar Heroin—San Diego County, 2017–2018 | CDC](#)

[BAT \(Botulism Antitoxin Heptavalent \(A, B, C, D, E, F, G\) - \(Equine\) | FDA](#)

[Botulism, Information for Health Professionals | CDPH](#)

[Black Tar Heroin May Cause Botulism Flyer | CDPH](#)

Thank you for your participation.

CAHAN San Diego

County of San Diego Health & Human Services Agency

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Urgent Phone for pm/weekends/holidays: (858) 565-5255

Secure Website: <https://member.everbridge.net>

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 San Diego Epidemiology Program at 619-619-8499 (after hours 858-565-5255).
- Receive call from the California Department of Public Health (CDPH) Division of Communicable Disease Control Duty Officer (DCDC DOD) who will discuss the case and release of antitoxin. (Note: the state's DCDC DOD should not be contacted directly from the hospital initially.)
- Alert the hospital pharmacy that antitoxin is being released from the Los Angeles Quarantine Station.
- 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, ambenonium chloride.
- Send the tubes to the hospital laboratory with instructions to refrigerate and ship to the San Diego County Public Health Laboratory.

Antitoxin administration

- The antitoxin currently available for wound botulism is 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 most current information on BAT® can be found [here](#). 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 (every 5 years) and hepatitis A and B.

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.

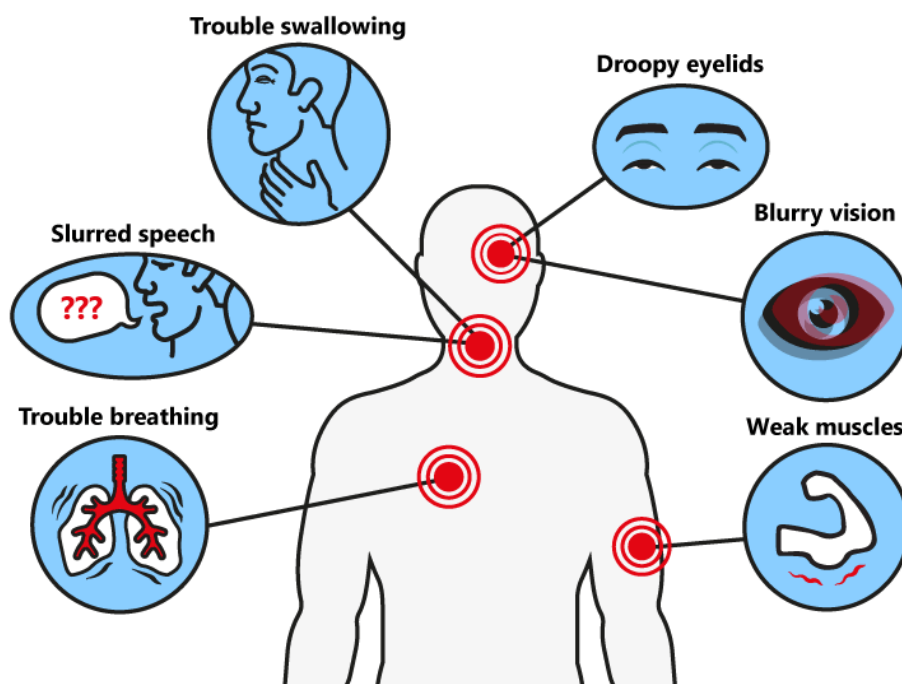
WARNING!

Black Tar Heroin May Cause Botulism

Injecting heroin, especially black tar heroin, can cause **WOUND BOTULISM**. **WOUND BOTULISM** is a serious disease caused by bacteria that can be found in heroin. These bacteria produce a toxin that causes paralysis.

LOOK FOR SYMPTOMS!

Symptoms can start several days to weeks after injecting drugs. You may or may not notice a wound. Botulism can make you weaker until you cannot breathe. It can kill you. **BUT** it can be treated if it is caught early.



UNDERSTAND YOUR RISK!

- **MUSCLING** and **SKIN POPPING** put you at highest risk.
- There is **NO WAY TO KNOW** if bacteria are in the heroin.
- **Cooking the drug DOES NOT KILL THE BACTERIA.**

If you have any of the symptoms, go to the nearest **EMERGENCY ROOM** immediately.

If you want or need treatment for a drug problem, call 1-800-662-HELP (4357)

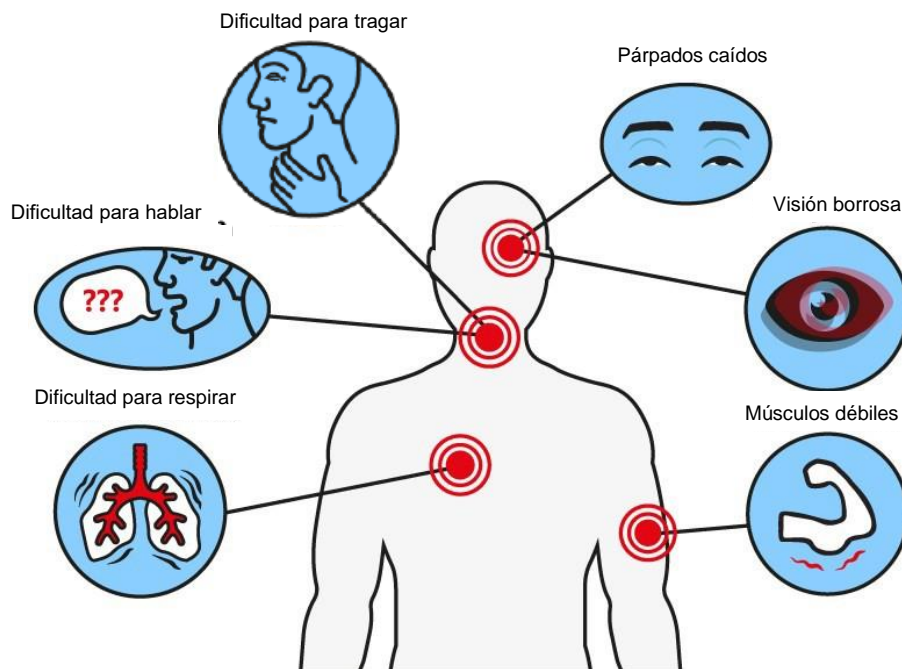
ADVERTENCIA DE BOTULISMO

La heroína de color negro podría estar contaminada

Injectarse heroína de color negro puede causar **BOTULISMO POR HERIDA**, una enfermedad grave causada por una bacteria que se puede encontrar en la heroína. Esta bacteria produce una toxina que causa parálisis.

BUSCAR SÍNTOMAS

Los síntomas pueden comenzar de varios días hasta semanas después de inyectarse drogas. Puede notar o no una herida. El botulismo puede debilitarlo hasta que no pueda respirar. Puede matarlo. Pero se puede tratar si se detecta a tiempo.



ENTENDER SU RIESGO

- Las inyecciones intramusculares y subcutáneas lo ponen en mayor riesgo pero inyectarse en una vena también es riesgoso.
- **NO HAY FORMA DE SABER** si hay bacterias en la heroína.
- Cocinar la droga **NO MATA LA BACTERIA**.

Si tiene alguno de los síntomas, vaya inmediatamente a la **SALA DE EMERGENCIA** más cercana. Lleve este folleto para ser visto rápidamente.



Si desea o necesita tratamiento por un problema con las drogas, llame al **1-800-662-HELP (4357)**