



**IN THIS ISSUE: NEW BOTULISM TREATMENT RESOURCES FOR HEALTHCARE PROFESSIONALS**

**CDC Highlights New Botulism Treatment Resources**

**Introduction**

Botulism is a rare, paralytic illness usually caused by a neurotoxin produced by the bacteria *Clostridium botulinum*. Sometimes botulism can also be attributed to other strains of the Clostridium bacteria, specifically *Clostridium butyricum* and *Clostridium baratii*.<sup>1</sup> Botulism does not spread from person to person; however, anyone can get botulism. There are four main types of botulism the Centers for Disease Control and Prevention (CDC) uses for surveillance purposes. These include:

- **Foodborne botulism** can occur by consuming foods contaminated by the botulinum toxin. More common sources are homemade foods that are improperly canned, preserved, or fermented. Contamination can occur in store-bought foods, although uncommon.
- **Wound botulism** can occur when spores get into an open wound and start to produce the toxin.
- **Infant botulism** occurs when the bacteria gets into an infant's intestines and start to produce toxin.
- **Other botulism** includes **Adult Intestinal toxemia**. This is a very rare type and can occur when bacteria enter an adult's intestines and starts producing toxin. Also included is **Iatrogenic botulism**. This occurs when too much toxin is injected for cosmetic (wrinkles) or medical reasons (migraines).<sup>2</sup>

Symptoms of botulism may vary depending on the type. They start in the head and move down the body.<sup>3</sup> Typical signs and symptoms might include difficulty swallowing, muscles weakness, double vision, drooping eyelids, blurry vision, slurred speech, and difficulty breathing. Foodborne and infant botulism may present with additional gastrointestinal symptoms. If left untreated, botulism may be fatal.<sup>4</sup>

This illness is considered a medical emergency. Diagnoses are based on clinical signs and

symptoms. Do not wait on laboratory confirmation to obtain consultation or begin treatment. If you think you have a suspect case of botulism, contact the state's emergency or after-hours number, 775-400-0333. If the patient displays clinical symptoms consistent with infant botulism, immediately contact the Infant Botulism Treatment and Prevention Program (IBTPP) at the California Department of Public Health for a no-cost clinical consultation at 510-231-7600 (24/7).

**Epidemiology**

Botulism is rare in the United States, on average, 110 cases are reported each year. Of these, 70% of cases are infant botulism, 20% are foodborne related, and the rest are mainly wound associated. Throughout the 1980's and 1990's, the incidence of wound associated cases of botulism increased due to use of black tar heroin.<sup>5</sup>

The prevalence of cases in Nevada is also very rare. In 2020, Carson City Health and Human Services (CCHHS) reported two cases of infant botulism. Both cases were attributed to environmental exposures (new construction and rural living).<sup>6</sup> In Washoe county, only three cases of infant botulism have been reported in the last five years.<sup>7</sup>

**Treatment Resources Update**

The CDC has released a [new video](#) intended to help healthcare providers prepare and administer the antitoxin used to treat botulism. It is also intended to answer some frequently asked questions when consulting with the CDC. Please use this video as well as the Food and Drug Administration's antitoxin package insert to help prepare patient care teams to act quickly when the antitoxin arrives. These resources may also be used by public health officials and first responders during large outbreak responses.

The video link demonstrates a step-by-step on how to prepare the antitoxin in a 1:10 dilution. Vials are single-use and any unused antitoxin should be discarded as it does not contain any preservatives.

Take blood, stool, or any other samples used for testing prior to administering antitoxin. The video also includes references for proper administration of the infusion once it is prepared.<sup>3</sup>

Additionally, the CDC created a guide for healthcare providers to respond to clinical signs and symptoms of infant botulism. [The Infant Botulism: Information for Clinicians](#) page includes information on case consultation, treatment, diagnostic testing, reporting, and more. This information is also available as a [printable PDF](#).<sup>8</sup>

<p><b>Summary of CDC's New Resources for Healthcare Providers Preparing and Administering Botulinum Antitoxin</b></p>
<ol style="list-style-type: none"><li>1. Video: <a href="#">Preparing and Administering Heptavalent Antitoxin for the Treatment of Botulism</a>.</li><li>2. CDC Website: <a href="#">The Infant Botulism: Information for Clinicians</a></li></ol>



### Technical Assistance & Reporting

If you think you have a suspect case of botulism, contact the state's emergency or after-hours number 775-400-0333. Washoe County Health District (WCHD) can provide assistance in coordinating sample testing and providing guidance to healthcare providers. **Providers can contact WCHD at 775-328-2447. To report a communicable disease, please fax report to the WCHD at 775-328-3764.**

### Acknowledgement

Thank you to all health care providers and infection control practitioners for their reporting and collaboration.

### References

<sup>1</sup> Centers for Disease Control and Prevention. (2018, October 4). *About Botulism*. Botulism. <https://www.cdc.gov/botulism/general.html>.

<sup>2</sup> Centers for Disease Control and Prevention. (2019, August 19). *Kinds of Botulism*. Botulism.

<https://www.cdc.gov/botulism/definition.html>.

<sup>3</sup> Centers for Disease Control and Prevention. (2020, October 16). *Preparing and Administering Heptavalent Antitoxin for Treatment of Botulism*. Youtube. Available at: <https://youtu.be/v-h6L2d7Hk0>.

<sup>4</sup> Centers for Disease Control and Prevention. (2021, February 9). *Symptoms*. Botulism.

<https://www.cdc.gov/botulism/symptoms.html>.

<sup>5</sup> Centers for Disease Control and Prevention. (2006, October 6). *Botulism: Epidemiological Overview for Clinicians*. Emergency Preparedness and Response.

<https://www.emergency.cdc.gov/agent/botulism/clinicians/epidemiology.asp#:~:text=An%20average%20of%20110%20cases,and%20women%20are%20affected%20equally.>

<sup>6</sup> Carson City Health and Human Services. (2020, December 10). *Board of Health County Health Reports*. Nevada Department of Public and Behavioral Health.

<http://dphh.nv.gov/uploadedFiles/dphhgov/content/Boards/BOH/Meetings/2020/12.10.20%20BOH%20County%20Health%20Reports.pdf>.

<sup>7</sup> Washoe County Health District. (2015-2021). *Epidemiology Program*. Epidemiology and Public Health Preparedness Division.

<sup>8</sup> Centers for Disease Control and Prevention. (2020, October 13). *Infant Botulism: Information for Clinicians*. Botulism.

[https://www.cdc.gov/botulism/infant-botulism.html?ACSTrackingID=USCDC\\_485-DM49106&ACSTrackingLabel=CDC%20and%20Food%20Safety%20Newsletter%3A%20Foodborne%20Outbreak%20Alerts%20Get%20a%20New%20Look%20&deliveryName=USCDC\\_485-DM49106](https://www.cdc.gov/botulism/infant-botulism.html?ACSTrackingID=USCDC_485-DM49106&ACSTrackingLabel=CDC%20and%20Food%20Safety%20Newsletter%3A%20Foodborne%20Outbreak%20Alerts%20Get%20a%20New%20Look%20&deliveryName=USCDC_485-DM49106).

**Figure 1. CDC's Updated Healthcare Provider Guidance on Administering Botulism Antitoxin<sup>8</sup>**

