



BOTULISM CASE REPORT SUMMARY LOS ANGELES COUNTY, 2015

Botulism is a rare but serious and potentially fatal paralytic illness caused by a nerve toxin produced by the bacterium *Clostridium botulinum*. The bacterial spores which causes botulism are common in both soil and water and produce botulinum toxin when exposed to low oxygen levels and certain temperatures. There are five main kinds of botulism: 1) Foodborne botulism can happen by eating foods that have been contaminated with botulinum toxin. Common sources of foodborne botulism are homemade foods that have been improperly canned, preserved, or fermented. Though uncommon, store-bought foods also can be contaminated with botulinum toxin, 2) Wound botulism can happen if the spores of the bacteria get into a wound and make a toxin. People who inject drugs have a greater chance of getting wound botulism. Wound botulism has also occurred in people after a traumatic injury, such as a motorcycle accident, or surgery, 3) Infant botulism can happen if the spores of the bacteria get into an infant's intestines. The spores grow and produce the toxin which causes illness. 4) Adult intestinal toxemia (also known as adult intestinal toxemia) botulism is a very rare kind of botulism that can happen if the spores of the bacteria get into an adult's intestines, grow, and produce the toxin (similar to infant botulism). Although we don't know why people get this kind of botulism, people who have serious health conditions that affect the gut may be more likely to get sick, 5) Latrogenic botulism can happen if too much botulinum toxin is injected for cosmetic reasons, such as for wrinkles, or medical reasons, such as for migraine headaches.

Because botulism infections may be fatal, they are considered medical emergencies and suspected cases are mandated to be reported to the Los Angeles County Department of Public Health (LAC DPH) immediately by telephone. The California Department of Public Health's (CDPH) Division of Communicable Disease Control is responsible for the investigation and surveillance of infant botulism cases identified in the county and across the state. LAC DPH is responsible for reporting suspected cases of infant botulism to CDPH's [Infant Botulism Treatment and Prevention Program](#)¹ for their investigation. Specialized antitoxin is used to treat botulism, which can only be released when authorized by LAC DPH or CDPH. Testing for case confirmation can be conducted at the LAC DPH Public Health Laboratory.

The number of confirmed botulism cases in LAC fluctuates from year to year. For the past 5 years, an average of three cases were confirmed annually.

In 2015, two associated cases of suspected botulism were reported in LAC: one was classified as probable (Case 1) and the other as confirmed (Case 2). Both cases had wound botulism, lived in the same sober living house, and reportedly used heroin together including using shared needles. Case 2 had onset of symptoms 11 days after Case 1's symptom onset. Botulinum toxin A was detected by mouse bioassay in a serum specimen from Case 2. The serum for Case 1, collected approximately 3 weeks after initial onset

¹ Infant Botulism Treatment and Prevention Program. Division of Communicable Disease Control, California Department of Public Health. www.infantbotulism.org.



of symptoms, was negative for botulinum toxin. However, because Case 1 had clinically compatible symptoms and was epidemiologically linked with Case 2, Case 1 was classified as a probable case.

In 2015, ACDC also received three other reports of suspected botulism which were ultimately not classified as cases. One had a history of injection drug use; serum testing was negative by matrix-assisted laser desorption/ionization-time of flight (MALDI-TOF), as a result an alternate diagnosis of myasthenia gravis was assigned. Another suspected case had a history of crystal methamphetamine use, but denied injection use. For this suspected case, serum testing by both mouse bioassay and MALDI-TOF were negative. The third suspected case had no identified risk factors. Serum testing by MALDI-TOF and serum/stool testing by mouse bioassay were negative, and EMG results were determined not to be consistent with botulism.

Upon notification and review of case history and symptoms, LAC DPH authorized the release and use of botulism antitoxin for all five suspected botulism cases reported in 2015.