

# Wound Botulism

Wound botulism occurs after *Clostridium botulinum* spores have been introduced into a wound and begin to elaborate toxin, which in turn causes signs and symptoms of a symmetric descending paralysis. Case reports of wound botulism were quite rare until 1982. From 1943 to 1982, 27 cases of wound botulism were reported to CDC.<sup>55</sup> In 1982, New York reported the first case of wound botulism associated with injection drug use. Since then, other clusters of wound botulism have been described among injection drug users, primarily in western states, e.g., California and Washington.

Among injecting drug users, *C. botulinum* spores are introduced subcutaneously either directly via contaminated drugs or indirectly by injecting through insufficiently disinfected skin. Spores, unlike botulinum toxin, are not inactivated by heat. Therefore, heating heroin mixtures does not guard against wound botulism. Wound botulism has also been documented among intranasal cocaine users, who may have wounds or skin breaks that allow for spore germination in the paranasal sinuses or nasal septums.

Wound botulism has never been documented in Alaska. Even so, health care providers who see patients with clinical signs, such as a descending paralysis or severe weakness and a history of injection drug use or infected wounds, should consider a diagnosis of botulism.

# Bioterrorism Considerations

Botulinum toxin poses a major bioweapons threat because of its extreme potency and lethality, its ease of production, transport and misuse, and the potential need for prolonged intensive care in affected persons.<sup>48</sup> A number of nations or states named by the U.S. State Department as “state sponsors of terrorism” have developed, or are developing, botulinum toxin as a biological weapon.

A deliberate aerosol or foodborne release of botulinum toxin could be detected by several features which include a large number of acute cases presenting all at once, cases involving an uncommon toxin type (C, D, F, or G), patients with a common geographic factor without a common dietary exposure, or multiple simultaneous outbreaks without a common source.

As for all cases of suspected botulism, health care providers who suspect an intentional aerosol or foodborne release of toxin as the source of a patient’s symptoms should contact the Section of Epidemiology immediately. Call (907) 269-8000 Monday–Friday 8am–5pm, or after-hours (800) 478-0084.