

# FACT SHEET

## BOTULISM

**Description of Agent:** Botulinum toxins are a group of seven related neurotoxins (Types A-G) produced by the bacterium, *Clostridium botulinum*. The toxin can be formed in canned foods and subsequently ingested, although the spore form of the organism may occasionally gain access to the body through the stomach where it can germinate and produce the toxin. Intentional release by terrorists would likely involve spraying the toxin, which could then produce illness via the inhalational route. Deliberate contamination of food supplies is also possible. Botulinum toxins act on the nervous system, particularly where the nerves connect with muscles. By weight, this toxin is many times more toxic than the nerve agent VX.

**Signs and Symptoms:** Drooping eyelids, general weakness, dizziness, dry mouth and throat, blurred and double vision and difficulty swallowing and speaking are followed by paralysis (progressing from the head down) and the development of respiratory failure. Symptoms may begin as early as 12-36 hours following ingestion or inhalation, but may require as long as several days in some cases. Mortality can reach 80% in some circumstances.

**Diagnosis:** The diagnosis of botulism is made clinically, as there are no specific laboratory tests. Assays for toxins are not widely available. Intentional release should be suspected if numerous co-located casualties present with the above symptoms.

**Treatment:** Supportive care is the mainstay of therapy, and consists chiefly of ventilatory assistance for respiratory failure. An antitoxin is available in small quantities in Australia and should be administered as soon as possible.

**Decontamination and Isolation:** Patients exposed to botulinum toxin by the aerosol route do not present a significant risk for secondary contamination or re-aerosolisation of the toxin. Toxin will not be absorbed through the skin (although spores may enter through skin wounds) and secondary aerosols from affected patients pose no risk of botulism transmission. Decontamination of surfaces contaminated by toxin may be accomplished using soap and water, or 0.5% hypochlorite. Spores are best killed by pressure-cooking foodstuffs to be canned.

**Outbreak Control:** Intentionally released aerosols of botulinum toxin probably pose little risk beyond the immediate period of release. In the event that contamination of foodstuffs is suspected, toxins may be destroyed by boiling for 10 minutes.