

From Utah to Las Vegas: Ricin Case Study

Introduction: Ricin is a highly toxic poison derived from seeds extracted from castor beans. It is contained in the waste produced during the process involved to manufacture castor oil.

According to the NYDOH, Ricin causes cell death by preventing cells from making the proteins necessary to maintain life. Based on a dose response relationship, if enough Ricin is inhaled, ingested, or injected, it can be fatal, or cause extreme morbidity. The amount of Ricin needed to be fatal is 500 micrograms, an amount that could fit on the head of a straight pin. As a bio-terrorism agent, it is attractive as it is fairly easy to make and is a stable substance with the ability to withstand temperatures up to 176 degrees Fahrenheit. Further, several methods can be used to poison someone with Ricin. Exposure can be caused by inhaling Ricin mist, through food or water contamination, or by the injection of a Ricin pellet. Death from exposure usually occurs within 36 – 72 after exposure.

Facts of the case: In 2008, a Utah resident named Roger Von Bergendorff was hospitalized in Las Vegas, Nevada after presenting symptoms consistent with exposure to Ricin. When a small amount of Ricin was found in Von Bergendorff's hotel room along with a storage unit he had rented, an investigation was conducted by both local and federal authorities. Although weapons and books related to anarchy were discovered, Von Bergendorff (who had a history of mental health issues) claimed that he was merely experimenting with the toxin and had no intentions of harming anyone. But on further investigation, "recipes" for Ricin production were found. He eventually pled guilty was sentenced to 3 ½ years in federal prison.

Epidemiological aspects of the events: The Center for Disease Control and Prevention (CDC) sent a team to assist the local public health department to determine the severity of Von Bergendorff's exposure, and to investigate if others had been contaminated. Although Ricin is not considered a contagious disease, it can spread through fomites, causing concern that hotel staff, hotel guests, and first responders may have been exposed. Due to this, the entire hotel and storage unit were decontaminated. There was not a significant epidemiological aspect to this case as there were no other reports of exposure. While Von Bergendorff ultimately made a full recovery, he was hospitalized and on a ventilator for or two months.

Management of the event: This case involved multiple agencies working together to ensure public safety. When Von Bergendorff was hospitalized, the hospital notified local authorities who responded by evacuating the hotel and conducting a thorough room search. Authorities worked together to decontaminate any areas which might have been polluted by the toxin. They

investigated all potential accomplices, and interviewed his cousin and roommate, Thomas Tholen. Because Tholen was the person who initially found the Ricin in Von Bergendorff's hotel room and notified the authorities, their Utah apartment was searched, but nothing was found.

Communications of the event: The communication for this case was focused on providing accurate information in a timely manner under a stressful environment. Local authorities had to provide information to the public, media, and other stakeholders. Public health officials and law enforcement worked together to issue a press release informing the public and providing accurate updates. They also had to dispel fake news and misinformation trending on social media platforms, as well as provide guidance on protocols to follow in the event of Ricin exposure. In addition to traditional media, the Las Vegas Police Department utilized Twitter as a means of sharing information about the incident, as well as responding to questions.

Summary: Ricin is a highly toxic agent that can be fatal at a high enough dose and has potential as a bio-terrorism agent. Roger Von Bergendorff was sentenced to federal prison due to Ricin possession and intent to sell to a third party. The management for this case included multiple level of authorities, indicating the seriousness of exposure to Ricin. The coordinated efforts included local, state, and federal agents as well as public health officials from the CDC, and emergency response personnel. The involvement of all these agencies resulted in the successful containment of the threat posed by Ricin.