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## Biological Terrorism: Anthrax Spores Re-aerosolization

### SUMMARY

During and after a suspected biological incident, certain environments, such as mail sorting facilities, may facilitate re-aerosolization of biological agents. This may persist even after time has elapsed and sorting machinery has been cleaned with bleach.

### DESCRIPTION

Two envelopes containing anthrax passed through sorting machines at the Brentwood Postal Facility in Washington, DC on October 12, 2001. The facility closed nine days later, after a postal worker was diagnosed with inhalational anthrax. During those nine days before closing, over 2,000 employees processed over 60 million pieces of mail. Environmental testing done shortly after the mail facility closed revealed widespread anthrax contamination.

To more thoroughly investigate the re-aerosolization potential at the postal facility, the Center for Disease Control and Prevention, in conjunction with Defense Research and Development Canada, conducted surface and air sampling on a previously contaminated sorter. The sorter had been idle for over two weeks and had been cleaned with .5% hypochlorite solution (bleach). Air sampling devices were located at the operator's station and at the opposite end of the sorter. Prior to activating the sorter, surface tests came back positive for anthrax, and air tests came back negative for anthrax. After the sorter was activated for ten minutes, low levels of anthrax were identified in air samples at both locations. The tests also showed that running the machinery could contaminate a facility at increasing levels over time.

Anthrax can still be detected around an active, contaminated sorter even after it has been cleaned and subsequently processed large amounts of mail. While there is only a limited understanding of the risks of low-dose anthrax exposure, even low levels of anthrax detected in the air is of concern. Public health officials need to recognize the potential for re-aerosolization and ensure that appropriate precautions are taken.

### CITATION

Dull PM, Wilson KE, Kournikakis B, Whitney EAS, et al. "Bacillus Anthracis Aerosolization Associated with a Contaminated Mail Sorting Machine." *Emerging Infectious Diseases*. October 2002. (<http://www.cdc.gov/ncidod/EID/vol8no10/02-0356.htm>)

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