DHR

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Advice for First Responders (911, EMS, EMA Personnel, Police, State Patrol, Fire, Sheriffs) Dealing with Suspicious Substances

(February 6, 2004)

The threat posed by suspicious substances ranges from none to credible, and no set of guidelines can cover every possible variation. Every situation will have unique features and the responder must use his or her own judgment in applying these guidelines.

A. SUSPICIOUS SUBSTANCES ASSOCIATED WITH PACKAGES AND LETTERS:

As there is no reliable way to determine visually whether a suspicious powder or substance contains a biological agent like anthrax or a toxin like ricin, it is important to assess the threat of the possible exposure. Factors that need to be assessed include the credibility of the exposure and whether the exposure might result in inhalational anthrax or cutaneous anthrax, or inhalation or ingestion of ricin.

Threat Credibility Assessment

Notify local law enforcement personnel who will conduct a threat credibility assessment. Whether or not the assessment should be conducted at the scene can be decided on a case-by-case basis at the discretion of the law enforcement personnel.

Credible Threat

1. Either one or both of the following circumstances may indicate a credible threat:

   - **A letter/package (either opened or unopened) with material present**. For example, it could be covered with powder, or have a substance staining the letter or leaking from it.
   - **A threat accompanies the letter or package** (substance need not be present)

2. If the above criteria for credible threats are met, the Federal Bureau of Investigation (FBI) should be notified at 404-679-9000 (24/7). If the FBI accepts the situation as a credible threat, follow the steps below:

    - **Notify local or district public health**
    - **and/or notify state public health:**
      During business hours: 404-657-2588
      Non-business hours (24/7 answering service)**:** 770-578-4104

No credible threat

A suspicious substance associated with packages or letters may have no threat credibility if any of the following apply:

- Neither of the two criteria for credible threats involving letters or packages is met.
- The FBI does not accept the situation as a credible threat.
- The substance in the letter/package is known to be harmless (e.g., crushed candy, crushed Tylenol, laundry soap, etc.)
- The setting is low profile and low-risk (e.g., not news media, not government, not public setting or event).

Substances associated with packages or letters with no threat credibility should be handled as follows:

- Place the letter/package in a plastic bag and discard as routine trash.
- Any substance not in the letter/package should be cleaned up like a routine household spill.

Substances in letters or packages with no threat credibility are very unlikely to contain anthrax or ricin and do not need to be tested. Public safety and public health officials do not need to provide on-scene response.

If the level of threat is uncertain

- Clean and disinfect with a bleach solution (one part household bleach to 10 parts water) using minimal protective gear (e.g., NIOSH-approved disposable mask, gloves).
- Place in plastic bag and discard as routine trash.

If further information is gathered that suggests that the FBI's initial appraisal (not a credible threat) was incorrect, go back to the steps under "credible threat" above.

Respiratory Protection Information

The basic purpose of any respirator is to protect an individual from inhalation of hazards (chemical, biological, etc.). Respirators provide protection either by removing contaminants from the air before it is inhaled (air-purifying) or by supplying an independent source of respirable air (air-supplying). Respirators providing protection against inhalation of **biological** organisms (in relative order of protection ranging from air-purifying to air-supplying) include disposable quarter-masks, half-mask respirators, full-facepiece respirators, powered air-purifying respirators (PAPR), air-supplied respirators, and self-contained breathing apparatus (SCBA). Among NIOSH approved air-purifying respirators, there are three categories of filter (N, R, and P) type based on resistance to oil. All will filter particles 0.3 microns or larger, but at various levels of filter efficiency (95%, 99%, and 99.97%). For example, in the hospital setting, disposable N95 masks are used to protect healthcare workers against hazards such as pulmonary tuberculosis (95% efficient), and P100 respirators are used for hazards such as hantavirus (99.97% efficient).

Individual anthrax spores are reported to be 2-6 microns in diameter, so would presumably be filtered at a 95% efficiency rate by a properly fitting N95 respirator mask.

Current data suggest that the SCBA which first responders currently use for entry into potentially hazardous atmospheres will provide responders with respiratory protection against biological exposures associated with a suspected act of biological terrorism. Protective clothing, including gloves and booties, also may be required for the response to a suspected act of biological terrorism.

The CDC recommendations, “Interim Recommendations for Firefighters and Other First Responders for the Selection and Use of Protective Clothing and Respirators Against Biological Agents” indicate that responders should use a NIOSH-approved, pressure demand SCBA in conjunction with a Level A protective suit in responding to a suspected biological incident where the agent and/or the dissemination method is unknown. In situations where dissemination was by a letter or package that can be easily bagged, the CDC guidelines indicate that responders should use a full-facepiece respirator with a P100 filter or powered air-purifying respirator (PAPR) with high efficiency particulate air (HEPA) filters.

However, this level of respiratory protection may not be available, practical, or feasible in all jurisdictions or response situations, especially when risk levels are deemed to be low. As such, a **minimum level of protection would consist of wearing a N95 mask and gloves when handling suspicious letters, packages, or substances**, although individual response scenarios may be

judged to warrant a higher level of respiratory protection. The choice of glove material (e.g., nitrile, vinyl, latex) should be based on safety, fit, durability, and comfort. Sterile gloves (e.g., surgical gloves) are not necessary.

Care of Exposed Persons

- Ensure that all persons with possible exposure to the package, letter, or substance remain on site until emergency personnel arrive; list all persons who physically handled the letter (package) and provide the list to authorities.
- Persons with exposure to the package, letter, or substance should wash their hands and/or exposed skin with soap and water. If a substance from the letter or package has visibly contaminated a person's clothing, the clothing should be removed and laundered with usual cleaning methods appropriate for the clothing affected.
- Preventive antibiotics for exposed individuals may be indicated if a substance contains anthrax spores (but not if ricin is present). However, **decisions about the need to begin preventive antibiotics should be made in consultation with public health officials**. In most circumstances, the decision to begin preventive antibiotics can be delayed until the presence or absence of anthrax spores is determined.
- Note: CDC currently does NOT recommend use of nasal swab specimens as part of evaluating anthrax threats/implied threats or evaluating concerned citizens who think they may have been exposed to anthrax.

Laboratory Testing

Prompt laboratory testing of suspicious letters, packages, or substances provides responders with rapid information about exposure risk such that appropriate preventive treatment can be offered.

- HazMat personnel (if a substance is present) or law enforcement personnel (if a substance is NOT present) should triple-bag the letter or package in plastic bags using personal protective equipment (including respiratory protection and protective clothing) based upon the anticipated level of exposure risk associated with the response situation.
- Care should be taken when bagging letters and packages to minimize creating a puff of air that could spread pathogens. It is best to avoid large bags and to work very slowly and carefully when placing objects in bags.
- **Do not smell, touch, taste, look closely at, or shake the contents of the package or letter.** Wash hands with soap and water.
- For credible threats, substances in letters/packages can be submitted for testing at the **Georgia Public Health Laboratory** (GPHL) according to the Packaging/Transport protocol below. Competent, trained and properly equipped personnel, including HazMat teams, should appropriately

prepare the letter/package for transport. Unopened packages should be screened for other hazards by local HazMat personnel or the FBI officer on scene.

- In addition to testing for anthrax and ricin, the GPHL will also test for other biologic or chemical agents as indicated by request or by preliminary test results.

Packaging/Transport Protocol

- Prior to transport, coordinate with the GPHL at **404-327-7900.**
- Place the double- or triple-bagged suspicious letter or package into a leak-proof container with a tight cover that is labeled "biohazard." **If ricin testing is proposed, do NOT use glass containers**.
- Place this container into a second leak proof container with a tight cover that is labeled "biohazard." The size of the second container should be no larger than a one-gallon paint can. No ice packs are needed.
- Place the second container into a third leak proof container with a tight cover that is labeled "biohazard." The third container should be no larger than five-gallon paint can.
- All three containers should meet state and federal regulations for transport of hazardous material, and be properly labeled.
- Local Law Enforcement personnel (or, if needed, State Patrol or Department of Natural Resources officers) should **immediately** transport specimens to the GPHL in Atlanta according to appropriate “chain of custody” protocols. Do NOT batch specimens for transport.

Decontamination of Responders

- Decontamination of protective equipment and clothing is an important precaution to make sure that any particles that might have settled on the outside of protective equipment are removed before taking off gear. Decontamination sequences currently used for hazardous material emergencies should be used as appropriate for the level of protection employed. Equipment can be decontaminated using soap and water, and a bleach solution (one part household bleach to 10 parts water) can be used as appropriate or if gear had any visible contamination. Note that bleach may damage some types of firefighter turnout gear. After taking off gear, response workers should shower using copious quantities of soap and water.

B. SUSPICIOUS SUBSTANCES NOT ASSOCIATED WITH LETTERS OR PACKAGES:

Credible threat (examples: substance plus threat, or no threat but high profile target—news media, government, sporting event, abortion clinic)

- The Federal Bureau of Investigation (FBI) should be notified at 404-679-9000 (24/7).
- **Notify local or district public health**
- **and/or notify state public health:**
  During business hours: 404-657-2588
  Non-business hours (24/7 answering service)**:** 770-578-4104
- Ensure that all persons with possible exposure to the substance remain on site until emergency personnel arrive; list all persons who physically handled the substance and provide the list to authorities.

Laboratory Testing

- Competent, trained and properly equipped personnel, including HazMat teams, should appropriately prepare the substance for transport according to above "Packaging/Transport protocol".
- HazMat personnel should double-or triple-bag the substance in plastic bags using personal protective equipment (including respiratory protection and protective clothing) based upon the anticipated level of exposure risk associated with the response situation. Please refer to the section "Respiratory Protection Information" above to assist responders in selection of appropriate respiratory protection. **At a minimum, gloves and a N95 respirator mask should be used.** The choice of glove material (e.g., nitrile, vinyl) should be based on safety, fit, durability, and comfort. Sterile gloves (e.g., surgical gloves) are not necessary.
- **Do not smell, touch, taste, look closely at, or shake the substance.** Care should be taken when bagging substances to minimize creating a puff of air that could spread pathogens or toxins. It is best to avoid large bags and to work very slowly and carefully when placing objects in bags.
- Law enforcement personnel (or, if needed, State Patrol or Department of Natural Resources officers) should **immediately** transport the bagged letter/package to the Georgia Public Health Laboratory (GPHL) in Atlanta under chain-of-custody protocols. Prior to transport, phone the GPHL at **404-327-7900**. Do NOT batch specimens for transport.
- In addition to testing for anthrax and ricin, the GPHL will also test for other biologic or chemical agents as indicated by request or by preliminary test results.

Care of Exposed Persons

- Persons with exposure to the substance should wash their hands and/or exposed skin with soap and water. If the substance has visibly contaminated a person's clothing, the clothing should be removed and laundered with usual cleaning methods appropriate for the clothing affected.
- Preventive antibiotics for exposed individuals may be indicated if a substance contains anthrax spores (but not if ricin is present). However, **decisions about the need to begin preventive antibiotics should be made in consultation with public health officials**. In most circumstances, the decision to begin preventive antibiotics can be delayed until the presence or absence of anthrax spores is determined.
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Other Resources:
Georgia Division of Public Health bioterrorism webpages at
http://health.state.ga.us/programs/emerprep/bioterrorism.shtml
http://health.state.ga.us/programs/emerprep/links.shtml
http://health.state.ga.us/pdfs/publications/factsheets/ricin.03.pdf

Contact telephone numbers:
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State public health**:**
During business hours: 404-657-2588
Non-business hours (24/7 answering service)**:** 770-578-4104
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