



**KTVU
CHANNEL
2 NEWS**

info

*biological / chemical
personal defense*



compiled and edited by KTVU Consumer Editor Tom Vacar

INFORMATION IS A POWERFUL DEFENSE

Since September 11, 2001, many average Americans, for the first time, feel threatened by the possibility that they, their families, co-workers friends and society could be attacked with biological chemical agents. However, when one looks at the science underlying many of these fears, you realize that such attacks are very hard to conduct on a large scale. The odds that any one person will be harmed by biological and chemical weapons have, thus far, proven to be rather remote. Nonetheless, with so many people concerned, KTVU Channel 2 News, presents this compilation of some expert information on the major threats for your review.

BEST INTERNET INFORMATION SOURCES ON BIOLOGICAL / CHEMICAL TERRORISM DEFENSE

<http://www.calpoison.org> - This is the website of California's statewide Poison Control information and assistance network. It has the latest local information on chemical and/or biological incidents.

<http://www.oes.ca.gov> - This is the website of the California Office of Emergency Services, the state's overall emergency management agency. This site has plenty of information on chemical/biological terrorism.

<http://www.bt.cdc.gov> - This is the website of the U.S. Government's Center for Disease Control. This is the key Federal agency for dealing with outbreaks of disease or poisonings.

<http://www.epa.gov/swerceep/> - This is the website of the U.S. Environmental Protection Agency's Office of Chemical Emergency Preparedness and Prevention. This agency has the primary responsibility in dealing with chemical incidents.

<http://www.rris.fema.gov> - This is the website of the Federal Emergency Management Agency's Rapid Response Information System. FEMA has the primary Federal responsibility in assisting state and local government during major disasters.

<http://www.usps.gov> - This is the website of the United States Postal Service. It has information for citizens on the safe and proper handling of suspicious mail.

<http://www.hopkins-biodefense.org> - This is the website of the Center for Civilian Biodefense Studies of the world famous John Hopkins University. It is packed with information on biological agents and how to defend against them.



IF YOU MUST CALL - POISON CONTROL



There are four poison control centers in California ready, willing and able to deal with individual phone calls, 24 hours a day, from citizens who feel they are in danger of or have been exposed to chemical or biological agents. **However, it's very important to understand that these resources are very limited.** They should be called only when a citizens feel they are real danger. Statewide, at any given hour, there are twenty or less poison control experts on duty. As you can see, they could very easily be overwhelmed by calls.

STATEWIDE POISON CONTROL 1 (800) 876-4766

STATE CHEMICAL/BIO-TERROR HOTLINE

This is a service of the Governor's Office of Emergency Services The Governor's Office of Emergency Services (OES) recently launched California's new toll-free "Safety Information and Referral Line" which will provide Californians with recorded non-emergency anthrax-related information and referrals from information technicians between 6 a.m. to 9 p.m. daily. Individuals with hearing impairments can obtain information via the toll-free TTY line. The "one-stop" information line will allow callers to choose from a menu that will give advice on personal and family preparedness, what to do in the event of a possible or real exposure to anthrax, and tips on what to do with suspicious mail or packages. There is also the option of talking to a trained technician who can answer questions and refer callers to various agencies, departments and internet web sites for further information.

STATE CHEMICAL/BIO-TERROR HOTLINE - 1 (800) 550-5234

TTY (for the hearing impaired) - 1 (800)550-5281

COUNTY OFFICES OF EMERGENCY SERVICES

Each county has its own Office of Emergency Services (OES) with its own disaster plan, tailored to its own unique needs. As conditions change, so do those plans.

Alameda	4985 Broder Blvd.	Dublin, CA 94568	(925) 803-7800
Contra Costa	50 Glacier Dr.	Martinez, CA 94553	(925) 228-5000
Marin	20 N. San Pedro Rd.	San Rafael, CA 94903	(415) 499-6584
Monterey	P.O. Box 1883	Salinas, CA 93902	(831) 455-4860
Napa	1195 Third St. Rm. 310	Napa, CA 94559	(707) 253-4421
San Francisco	1011 Turk Street	San Francisco, CA 94102	(415) 558-2700
San Mateo	401 Marshall St. / OES	Redwood City, CA 94063	(650) 363-4790
Santa Clara	55 West Younger	San Jose, CA 95110	(408) 299-3751
Santa Cruz	701 Ocean Street #330	Santa Cruz, CA 95060-4073	(831) 454-2210 or 471-1165
Solano	530 Union Ave. Suite 100	Fairfield, CA 94553	(707) 421-6330
Sonoma	2300 County Center Dr.	Santa Rosa, CA 95403	(707) 565-1152

FEDERAL AGENCIES

FEDERAL CHEMICAL/BIOLOGICAL REPORTING HOTLINE 1 (800) 424-8802

FEDERAL RADIOLOGICAL REPORTING HOTLINE 1 (800) 586-8100



KEY QUESTIONS & ANSWERS WITH AN EXPERT



**Dr. Jeffrey P. Koplan -
Director of the U.S. Centers of Disease Control and Prevention**

1. What is the average risk of contracting anthrax?

The risk of any individual in this country contracting anthrax is infinitesimal. The risk is for people who have been in a place of known exposure and we've seen that in a few instances in the last couple of weeks in this country. It's been in one business place in Florida and it's been in a couple of locations in New York City, a governmental office building in Washington. Persons who have not been in these circumstances are not at-risk.

2. What can the average person do to protect himself/herself?

Citizens in the country the best approach to take in dealing with anthrax, is to know a little bit more about anthrax. For one, it's not contagious, it doesn't spread from person-to-person. Two, it's a disease that once exposed to is treatable and we have a number of different antibiotics that can be used to treat it. And, those antibiotics are very effective in preventing a person from ever getting the disease once exposed. And, if someone does develop cutaneous anthrax, for example, it's readily treatable.

3. Should people buy and store antibiotics?

There's no need to buy or store antibiotics, and indeed it can be detrimental to both the individual and to the community. For one, only people who are exposed to anthrax need to take antibiotics and that needs to be in consultation with health authorities to make that determination. Two, the person may not stockpile or store the correct antibiotics; there are number of different ones that can be used for this condition. Three, we can get those antibiotics to you when you need them. We have the ability and we have the dosage to deliver over 2 million full courses of therapy. One of the antibiotics [is] Ciprofloxacin, or Cipro and we have other medications available as well. So, individuals do not need to stockpile or store antibiotics.

4. Should the public be vaccinated against anthrax?

For persons exposed to anthrax or for people with the disease there is no vaccine available for the general public. The antibiotics we use are very effective in preventing anthrax from occurring.

5. Can a person get screened or tested for anthrax?

There is no screening test for anthrax; there is no test that a doctor can do for you that says you've been exposed to or carry it. The only way that it can be determined is through a public health investigation. And in those circumstances, for example, where people work in a given office or on a given floor have been exposed, the public health officials make great and aggressive efforts to inform people whether they have been exposed or not, and thus their need for antibiotics. But, the tests that you read about or hear about, whether they're blood tests or nasal swabs or other tests, are not tests to determine whether an individual should be treated. These nasal swabs and environmental tests are merely to determine the extent of exposure in a given building or workplace.

6. What are the symptoms of anthrax?

There are three clinical presentations of anthrax. And they are largely determined by the route of entry of the anthrax into the human body and some of the clinical manifestations, the symptoms. But the three are: cutaneous anthrax, where your skin surface is exposed and you develop a skin lesion. Inhalation anthrax in which you breathe in the particles. And, gastrointestinal anthrax in which you ingest the particles, you eat the particles. And those have three different clinical manifestations, symptoms as well. An important thing for people of the public in general, and certainly healthcare providers in particular to realize in this, what does cutaneous anthrax look like? Because that's what we've seen in a couple of cases up in New York and that's something worth being able to spot and identify quickly and report to your public health authorities. Cutaneous anthrax looks like a brown recluse spider bite, those that have seen those. And what it really looks like is a swelling on the skin, it could be anywhere but often on the arms or hands and the swelling then develops a central area of ulceration of a depression, and then a scab or what we call a eschar, a very dark, blackish-brown scab forms over that central area. It can be painless and it can be accompanied by a fever or not. --- but this is something well worth noting. And, it doesn't look like a lot of other things.

7. Is anthrax contagious?

Anthrax can not be spread from person-to-person. One person is not contagious to another person. We can only get it from the mechanisms of exposure to the skin, breathing it, or eating it.



U.S. POSTAL SERVICE



Suspicious Letter or Package Guidelines

1. Do not shake or empty the contents of any suspicious envelope or package; DO NOT try to clean up powders or fluids.
2. PLACE the envelope or package in a plastic bag or some other type of container to prevent leakage of contents.
3. If you do not have any container, then COVER the envelope or package with anything (e.g., clothing, paper, trash can, etc.) and do not remove this cover.
4. Then LEAVE the room and CLOSE the door, or section off the area to prevent others from entering (i.e., keep others away).
5. WASH your hands with soap and water to prevent spreading any powder to your face or skin.
6. If you are at HOME, then report the incident to local police. If you are at WORK, then report the incident to local police, and notify your building security official or an available supervisor.
7. If possible, LIST all people who were in the room or area when this suspicious letter or package was recognized. Give this list to both the local public health authorities and law enforcement officials for follow-up investigations and advice.
8. Remove heavily contaminated clothing and place in a plastic bag that can be sealed; give the bag to law enforcement personnel.
9. Shower with soap and water as soon as possible. Do not use bleach or disinfectant on your skin.

MAIL ADVICE FROM THE AMERICAN RED CROSS

Q. What should I do if I receive a suspicious unopened letter or package with a threatening message?

- A. 1. DO NOT open, shake or empty the contents of any suspicious envelope or package.
2. Place the envelope or package in a plastic bag or other container to prevent leakage of contents.
3. Cover the envelope or package with anything (e.g., clothing, paper, trash can, etc.), if you do not have a container, and do not remove this cover. Then leave the room and close the door, or section off the area to prevent others from entering.
4. Wash your hands with soap and water to prevent spreading any powder to your face.
5. If you are at home, report the incident to local police. If you are at work, report the incident to local police, and notify your building security official or an available supervisor.
6. List all people who were in the room or area when the suspicious letter or package was recognized. Give this list to both the local public health authorities and law enforcement officials for follow-up investigations and advice.

Q. What should I do if I open an envelope or package and powder spills out?

- A. 1. DO NOT try to clean up the powder. Cover the spilled contents immediately with anything (e.g., clothing, paper, trash can, etc.) and do not remove this cover!
2. Leave the room and close the door, or section off the area to prevent others from entering.
3. Wash your hands with soap and water to prevent spreading any powder to your face.
4. If you are at home, report the incident to local police. If you are at work, report the incident to local police, and notify your building security official or an available supervisor.
5. Remove contaminated clothing as soon as possible and place in a plastic bag, or some other container that can be sealed. This clothing bag should be given to the emergency responders for proper handling.
6. Shower with soap and water as soon as possible. Do not use bleach or other disinfectant on your skin.
7. If possible, list all people who were in the room or area, especially those who had actual contact with the powder. Give this list to both the local public health authorities so that proper instructions can be given for medical follow-up, and to law enforcement officials for further investigation.

Q. How can I identify a suspicious package or letter?

- A. According to the U.S. Postal Service, typical characteristics of suspicious letters or parcels include those that:
- 1) have any powdery substance on the outside,
 - 2) are unexpected or from someone unfamiliar to you,
 - 3) have excessive postage
 - 4) have handwritten or poorly typed address, incorrect titles or titles with no name, or misspellings of common words,
 - 5) are addressed to someone no longer with your organization or are otherwise outdated,
 - 5) have no return address, or have one that can't be verified as legitimate,
 - 9) are of unusual weight, given their size, or are lopsided or oddly shaped,
 - 8) have an unusual amount of tape,
 - 9) are marked with restrictive endorsements, such as "Personal" or "Confidential" and/or
 - 10) have strange odors or stains.



MAIL ADVICE FROM THE AMERICAN RED CROSS
(continued)

Q. What should I do if I suspect that a biological agent has been released into the air?

- A. 1. Turn off fans or ventilation units in the area.
2. Leave the area immediately.
3. Close the door, or section off the area to prevent others from entering.
4. If you are at home, call 9-1-1 to report the incident to local police. They will notify the FBI and other appropriate authorities. If you are at work, call 9-1-1 or your local emergency number to report the incident to local police who in turn will notify the FBI and other appropriate authorities. Also, notify your building security official or an available supervisor.
5. Shut down the air handling system in the building, if possible.
6. If possible, list all the people who were in the room or area. Give this list to both the local public health authorities so that proper instructions can be given for medical follow-up, and to law enforcement officials for further investigation.

SUSPICIOUS MAIL INCIDENT NOTES:

If suspicious mail arrives, write down the names of anyone who handled it or was around it. This should include, day time employees, night time employees, vendors, suppliers, custodians, visitors and anyone else you can remember.

When did mail arrive? _____

Who handled it?

Name _____ Location _____

Name _____ Location _____

Name _____ Location _____

Name _____ Location _____

Name _____ Location _____

Who else was in the room(s) where the mail was handled (employees and visitors)?

Name _____ Location _____

Name _____ Location _____

Name _____ Location _____

Name _____ Location _____

Name _____ Location _____

Name _____ Location _____

Name _____ Location _____

Name _____ Location _____

Has anyone reported flu-like symptoms or has anyone called in sick?

Name _____ Location _____

Name _____ Location _____

Name _____ Location _____

Name _____ Location _____



ANTHRAX ADVICE FROM THE AMERICAN RED CROSS

Q. What is anthrax?

A. Anthrax is an acute, infectious disease caused by the spore-forming bacterium *Bacillus anthracis*. The cutaneous form (contracted through the skin) is the most common and is less deadly than the inhalation, or pulmonary, form (contracted through inhaling the spores).

Q. How do I get it?

A. It is transmitted by humans handling products from infected animals or contaminated materials, or by inhaling anthrax spores

Q. Is anthrax contagious?

A. There is no evidence of direct person-to-person spread of anthrax.

Q. What are the symptoms of anthrax infection?

A. Symptoms of the disease vary depending on how the disease was contracted:

Cutaneous: Most (about 95 percent) anthrax infections occur when the bacterium enters a cut or abrasion on the skin, or when handling contaminated wool, hides, leather or hair products of infected animals. Skin infections begin as a raised itchy bump that resembles an insect bite but within 1-2 days develops into a blister and then a painless ulcer. Lymph glands in adjacent areas may swell.

Inhalation: Initial symptoms may resemble the common cold. After several days, the symptoms may progress to severe breathing problems and shock.

Gastrointestinal: May follow the consumption of contaminated meat and is characterized by an acute inflammation of the intestinal tract. Initial signs of nausea, loss of appetite, vomiting and fever, are followed by abdominal pain and severe diarrhea.

Q. When do symptoms appear?

A. Symptoms usually appear within seven days of exposure to the anthrax bacteria.

Q. How common is anthrax?

A. Anthrax is most common in agricultural regions, where it occurs in animals. These include South and Central America, Southern and Eastern Europe, Asia, Africa, the Caribbean and the Middle East. When anthrax affects humans, it is usually due to an occupational exposure to infected animals or their products. Anthrax in wild livestock has occurred in the United States, but it is rare.

Q. Can the disease be treated?

A. Yes. Treatment with appropriate antibiotics is effective, but timing is crucial: a delay of even hours can inhibit effectiveness. There are three types of approved antibiotics for anthrax: ciprofloxacin (Cipro), tetracyclines (including doxycycline) and penicillins. People who have been exposed to anthrax but do not have symptoms should consult with a medical professional who will determine the best course of action for recovery.

Q. Should I ask my doctor to write a prescription for antibiotics so that I can take them as a precautionary measure?

A. No. The Red Cross supports the CDC's recommendation against taking unnecessary antibiotics for possible anthrax exposure. Taking antibiotics will not make you immune to the disease and could lower your ability to fight other illnesses. Widespread use of antibiotics could also lead to organisms developing resistance to these drugs, making them ineffective. Federal health officials have ample supplies of needed drugs and medical supplies they can deliver anywhere in the United States within 12 hours of a request for assistance.

Q. Are vaccines effective?

A. An anthrax vaccine was licensed by the FDA in 1970 for at-risk veterinary and laboratory workers and livestock handlers. The Department of Defense also reserves a stockpile of the vaccine for military use and for some anthrax researchers. The vaccine is in short supply and not available to the general public.



ADVICE FROM THE AMERICAN RED CROSS (continued)



Q. Is anthrax easy to use as a biological weapon?

A. The spores have to be turned into a microscopically fine powder of a certain size to be absorbed by the lungs and released in a certain way in order to be effective. This is difficult to do.

Q. Does the government have a plan in place to make antibiotics available in the event of mass exposure?

A. Yes. The CDC's National Pharmaceutical Stockpile is available to any community in need of additional medicinal support in response to an event involving any biological agent. It consists of several tons of needed pharmaceutical supplies and equipment, strategically located throughout the United States, that will be delivered to the local community within 12 hours of an event taking place. The Federal Response Plan does not need to be activated in order for the stockpile to be utilized by a local community.

Q. Are blood or blood products used as a treatment for anthrax infection?

A. Antibiotics are the primary treatment for an anthrax infection. Neither blood nor blood products are used in a case of anthrax unless the patient has another condition requiring blood or blood products.

Q. Should I buy a gas mask?

A. No. The Red Cross supports the CDC's recommendation that it is not necessary to purchase a gas mask. In the event of a public health emergency, local and state health departments will inform the public about the actions individuals need to take.

Q. I haven't opened a suspicious letter and have no evidence of an aerial release of an agent but am still worried about possible infection. Who should I contact in my local area if I'm still worried?

A. Contact your local health department, or your doctor, for more information if you are worried about anthrax exposure. Don't start taking antibiotics unless advised to do so by your doctor or by health authorities.

CENTER FOR DISEASE CONTROL - OTHER BIOLOGICAL THREATS

BOTULISM

Botulism is a muscle-paralyzing disease caused by a toxin made by a bacterium called *Clostridium botulinum*. There are three main kinds of botulism:

Foodborne botulism occurs when a person ingests pre-formed toxin that leads to illness within a few hours to days. Foodborne botulism is a public health emergency because the contaminated food may still be available to other persons besides the patient. With foodborne botulism, symptoms begin within 6 hours to 2 weeks (most commonly between 12 and 36 hours) after eating toxin-containing food. Botulism is not spread from one person to another. Foodborne botulism can occur in all age groups.

Infant botulism occurs in a small number of susceptible infants each year who harbor *C. botulinum* in their intestinal tract.

Wound botulism occurs when wounds are infected with *C. botulinum* that secretes the toxin.

Symptoms of botulism: include double vision, blurred vision, drooping eyelids, slurred speech, difficulty swallowing, dry mouth, muscle weakness that always descends through the body: first shoulders are affected, then upper arms, lower arms, thighs, calves, etc. Paralysis of breathing muscles can cause a person to stop breathing and die, unless assistance with breathing (mechanical ventilation) is provided.

A supply of antitoxin against botulism is maintained by CDC. The antitoxin is effective in reducing the severity of symptoms if administered early in the course of the disease. Most patients eventually recover after weeks to months of supportive care.



PNEUMONIC PLAGUE

Plague is an infectious disease of animals and humans caused by the bacterium *Yersinia pestis*. *Y. pestis* is found in rodents and their fleas in many areas around the world. Pneumonic plague occurs when *Y. pestis* infects the lungs

The first signs of illness in pneumonic plague are fever, headache, weakness, and cough productive of bloody or watery sputum. The pneumonia progresses over 2 to 4 days and may cause septic shock and, without early treatment, death.

Person-to-person transmission of pneumonic plague occurs through respiratory droplets, which can only infect those who have face-to-face contact with the ill patient. Early treatment of pneumonic plague is essential. Several antibiotics are effective, including streptomycin, tetracycline, and chloramphenicol. There is no vaccine against plague. Prophylactic antibiotic treatment for 7 days will protect persons who have had face-to-face contact with infected patients.

SMALLPOX

Smallpox infection was eliminated from the world in 1977. Smallpox is caused by variola virus. The incubation period is about 12 days (range: 7 to 17 days) following exposure. The majority of patients with smallpox recover, but death occurs in up to 30% of cases.

Initial symptoms include: high fever, fatigue, and head and back aches. A characteristic rash, most prominent on the face, arms, and legs, follows in 2-3 days. The rash starts with flat red lesions that evolve at the same rate. Lesions become pus-filled and begin to crust early in the second week. Scabs develop and then separate and fall off after about 3-4 weeks.

Smallpox is spread from one person to another by infected saliva droplets that expose a susceptible person having face-to-face contact with the ill person. Persons with smallpox are most infectious during the first week of illness, because that is when the largest amount of virus is present in saliva. However, some risk of transmission lasts until all scabs have fallen off. Routine vaccination against smallpox ended in 1972. The level of immunity, if any, among persons who were vaccinated before 1972 is uncertain; therefore, these persons are assumed to be susceptible. Vaccination against smallpox is not recommended to prevent the disease in the general public and therefore is not available. In people exposed to smallpox, the vaccine can lessen the severity of or even prevent illness if given within 4 days after exposure. Vaccine against smallpox contains another live virus called vaccinia. The vaccine does not contain smallpox virus. The United States currently has an emergency supply of smallpox vaccine. There is no proven treatment for smallpox but research to evaluate new antiviral agents is ongoing. Patients with smallpox can benefit from supportive therapy (intravenous fluids, medicine to control fever or pain, etc.) and antibiotics for any secondary bacterial infections that occur.



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