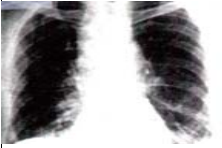
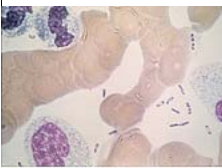




Bioterrorist agents: differential diagnosis, initial laboratory tests, and Public Health actions



If you suspect disease from a potential bioterrorism event call Santa Cruz County Disease Prevention and Control IMMEDIATELY: Tel: 831-454-4114 or After Hours 831-471-1183

We will arrange for specialized lab testing; provide treatment, prophylaxis, and infection control guidelines; and activate local, state, and federal emergency response systems

Syndrome	Differential diagnosis	Bioterrorism threat disease description	Picture	Initial laboratory & other diagnostic test results	Immediate public health & infection control actions
Acute Respiratory Distress with Fever	Dissecting aortic aneurysm, inhalational anthrax, pulmonary embolism	<u>Inhalational Anthrax</u> Abrupt onset of fever; chest pain; respiratory distress without radiographic findings of pneumonia; no history of trauma or chronic disease; progression to shock and death within 24-36 hours		Chest x-ray with widened mediastinum; gram-positive bacilli in sputa or blood; definitive testing available through public health laboratory network.	Call Local Health Department. Alert laboratory to possibility of anthrax. Standard precautions.
	Community acquired pneumonia, Hantavirus Pulmonary Syndrome, meningococemia, pneumonic plague, rickettsiosis	<u>Pneumonic Plague</u> Apparent severe community-acquired pneumonia but with hemoptysis, cyanosis, gastrointestinal symptoms, shock		Gram-negative bacilli or coccobacilli in sputa, blood or lymph node; safety-pin appearance with Wright or Giemsa stain; definitive testing available through public health laboratory network.	Respiratory isolation with droplet precautions. Call hospital infection control and Local Health Department. Ask family members/close contacts of patient to stay at the hospital (if already present) for public health interview/chemoprophylaxis; get detailed address and phone number information. Alert laboratory to possibility of plague.
	Plague, Q fever, Staphylococcal enterotoxin B, phosgene, tularemia	<u>Ricin (aerosolized)</u> Acute onset of fever, chest pain and cough, progressing to respiratory distress and hypoxemia; not improved with antibiotics; death in 36-72 hours		Chest x-ray with pulmonary edema. Consult with Local Health Department regarding specimen collection and diagnostic testing procedures.	Call Local Health Department. Standard precautions.
	Influenza, adenovirus, mycoplasma	<u>Staphylococcal enterotoxin B</u> Acute onset of fever, chills, headache, nonproductive cough and myalgia (influenza-like illness) with a NORMAL chest x-ray.		Primarily clinical diagnosis. Consult with Local Health Department regarding specimen collection and diagnostic testing procedures.	Call Local Health Department. Standard precautions.
Acute Rash with Fever	Varicella, disseminated herpes zoster, vaccinia, monkeypox, cowpox	<u>Smallpox</u> Papular rash with fever that begins on the face and extremities and uniformly progresses to vesicles and pustules; headache, vomiting, back pain, and delirium common		Clinical with laboratory confirmation; vaccinated, gowned and gloved person obtains specimens (scabs or swabs of vesicular or pustular fluid). Call public health immediately before obtaining specimen; definitive testing available through public health laboratory network.	Call hospital infection control immediately. Strict isolation in negative pressure room, Ask family members/close contacts of patient to stay at the hospital (if already present) for public health interview and vaccination; get detailed address and phone number information. Call Local Health Department immediately.
	Meningococemia, malaria, typhus, leptospirosis, borreliosis, thrombotic thrombocytopenic purpura (TTP), Hemolytic Uremic Syndrome (HUS)	<u>Viral Hemorrhagic Fever (e.g., Ebola)</u> Fever with mucous membrane bleeding, petechiae, thrombocytopenia and hypotension in a patient without underlying malignancy		Definitive testing available through public health laboratory network--call public health immediately.	Call hospital infection control and Local Health Department. Immediately isolation room with contact precautions. Ask family members/close contacts of patient to stay at the hospital (if already present) for public health interview and follow-up; get detailed address and phone number information.

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Syndrome	Differential diagnosis	Bioterrorism threat disease description	Picture	Initial laboratory & other diagnostic test results	Immediate public health & infection control actions
Neurologic Syndromes	Guillain-Barre Syndrome; myasthenia gravis; midbrain stroke; tick paralysis; Mg++ intoxication; organophosphate, carbon monoxide, paralytic shellfish, or belladonna-like alkaloid poisoning; polio; Eaton-Lambert myasthenic syndrome	Botulism Acute bilateral descending flaccid paralysis beginning with cranial nerve palsies		CSF protein normal; EMG with repetitive nerve stimulation shows augmentation of muscle action potential; toxin assays of serum, feces, or gastric aspirate available through public health laboratory network.	Request botulinum antitoxin from local/state health department; call Local Health Department. Standard precautions.
	Herpes simplex, post-infectious	Encephalitis (Venezuelan, Eastern, Western) Encephalopathy with fever and seizures and/or focal neurologic deficits.		Serologic testing available through public health laboratory network.	Call Local Health Department. Standard precautions.
Influenza-like Illness	Numerous diseases, including Q Fever	Brucellosis Irregular fever, chills, malaise, headache, weight loss, profound weakness and fatigue. Arthralgias, sacroiliitis, paravertebral abscesses. Anorexia, nausea, vomiting, diarrhea, hepatosplenomegaly. May have cough and pleuritic chest pain.		Tiny, slow-growing, faintly-staining, gram-negative coccobacilli in blood or bone marrow culture. Leukocyte count normal or low. Anemia, thrombocytopenia possible. CXR nonspecific: normal, bronchopneumonia, abscesses, single or miliary nodules, enlarged hilar nodes, effusions. Serologic testing and culture available through public health laboratory network.	Notify laboratory if brucellosis suspected--microbiological testing should be done in a biological safety cabinet to prevent lab-acquired infection. Call Local Health Department. Standard precautions.
		Tularemia (Typhoidal, Pneumonic) Fever, chills, rigors, headache, myalgias, coryza, sore throat initially; followed by weakness, anorexia, weight loss. Substernal discomfort, dry cough if pneumonic disease.		Small, faintly-staining, slow-growing, gram-negative coccobacillus in smears or cultures of sputum, blood. CXR may show infiltrate, hilar adenopathy, effusion. Definitive testing available through public health laboratory network.	Notify laboratory if tularemia suspected--microbiological testing should be done in a biological safety cabinet to prevent lab-acquired infection. Call Local Health Department. Standard precautions.
Blistering Syndromes	Mustard agents, Staphylococcal enterotoxin B	T2 Mycotoxin Abrupt onset of mucocutaneous and airway irritation including skin (pain and blistering), eye (pain and tearing), gastrointestinal (bleeding, vomiting, and diarrhea), and airway (dyspnea and cough)		Consult with Local Health Department regarding specimen collection and diagnostic testing procedures.	Unlike other biological agents or biotoxins, trichothecene mycotoxins are dermally active and patients exposed to them should be decontaminated as soon as possible with soap and copious amounts of water. Call Local Health Department for further instructions.