

## Common Biowarfare Agent Characteristics

Disease	Symptoms	Person to Person?	Infective Dose (Aerosol)	Incubation Period	Illness Duration	Mortality	Organism Persistence	Treatment	Prophylaxis
<b>Anthrax (Inhalation)</b>	Fever, malaise, fatigue, cough, mild chest discomfort, respiratory distress, shock	No	8,000 - 50,000 spores	1-6 Days	3-5 days	High once symptoms appear	Spores can be viable in soil for >40 yrs	Ciprofloxacin Doxycycline	Ciprofloxacin Doxycycline
<b>Botulism</b>	Drooping eyelids, general weakness, dizziness, dry mouth and throat, blurred and double vision, progressive descending symmetrical paralysis	No	0.001 mg/kg is LD50	12 - 36 hrs up to several days	Death in 24 - 72 hours; lasts months if not lethal	High without respiratory support	Weeks in non-moving water and soil	Antitoxin, Supportive Care	
<b>Brucellosis</b>	Irregular fever, headache, malaise, chills, sweating, myalgia, joint pain, depression	No	10-100 organisms	5 - 60 days	Weeks to Months	5% untreated	6 wks in dust and 10 wks in soil or water	Doxycycline + Rifampin	
<b>Pneumonic Plague</b>	High fever, chills, headache, productive cough - watery then bloody	Yes, highly	<100 organisms	2-3 days	1-6 days (usually fatal)	High unless treated in 12-24 hrs	For up to 1 year in soil - 270 days in live tissue	Gentamycin Doxycycline	Doxycycline
<b>Q Fever</b>	Fever, chills, headache, diaphoresis, malaise, fatigue, anorexia, and weight loss	Rarely	1-10 organisms	7 days (range 2-14 days)	Weeks	Very Low	Able to withstand heat and drying; persists in environment for weeks to months	Tetracycline Doxycycline	Doxycycline Tetracycline
<b>Smallpox</b>	Non-specific flu-like prodrome (malaise, fever, headache) then synchronously evolving maculopapular rash progressing to vesicles then pustules	Yes, highly	Assumed low (10 - 100 organisms)	12-14 days (range 7-17 days)	4 weeks	High to Moderate	Very stable	Cidofovir *	
<b>Tularemia</b>	Fever, headache, malaise, weight loss, nonproductive cough	No	10-50 organisms	3-6 days (range 1-21 days)	2 weeks	Moderate if untreated	Months in moist soil or other media	Gentamycin Doxycycline Ciprofloxacin	Doxycycline Ciprofloxacin
<b>Viral Encephalites</b>	Fever, rigors, severe headache, photophobia, malaise, nausea, vomiting, diarrhea may follow	Low	10-100 organisms	1-5 days	Days to Weeks	Variable	Relatively unstable in the environment	Supportive care	
<b>Viral Hemorrhagic Fevers</b>	Fever, malaise, myalgia, prostration; vascular permeability may present as conjunctival injection and petechial hemorrhage and progress to mucous membrane hemorrhage and shock	Moderate	1-10 organisms	4-21 days	Days to Weeks	5-90% case fatality rate depending on virus	Relatively unstable in the environment	Ribavirin, Supportive care	
<b>Ricin</b>	Depends on route of entry. Aerosol route: fever, chest tightness, cough, hypothermia. Oral route: gastrointestinal hemorrhage	No	3-5 ul/kg is the LD50	18-24 hours	Days. Death within 10-12 days for ingestion	High	Stable	Inhalation: supportive care. GI: lavage, charcoal, cathartics	
<b>Staph Enterotoxin B</b>	Sudden onset of fever, chills, headache, myalgias, non-productive cough	No	30 ng/person incapacitation	3-12 hours after inhalation	Days	<1%	Resistant to freezing	Supportive care	
<b>T-2 Mycotoxins</b>	Skin pain, redness, necrosis, sloughing of epidermis, wheezing, chest pain, hemoptysis	No	Moderate	Minutes to hours	Variable. Death in min.to days	Moderate	Stable for years at room temperature	Supportive care	

LD50=Lethal dose ug/kg

Ricin and botulism are lethal at all levels

\* May be effective

Source: Adapted from Santa Clara County Public Health Dept  
Bioterrorism Information for Clinicians