

CHEMICAL/BIOLOGICAL REFERENCE CHART

Biological Agents

Agent	Dissemination	Transmission (Person to Person)	Incubation	Lethality
Anthrax	Spores in aerosol	No (except cutaneous)	1-5 days	High
Cholera	Ingestion and aerosol	Rare	12 hours to 6 days	Low with treatment
Plague	Aerosol	High	1-3 days	High if untreated
Tularemia	Aerosol	No	1-10 days	Moderate if untreated
Q Fever	Ingestion and aerosol	Rare	14-16 days	Very low
Smallpox	Aerosol	High	10-12 days	Low
VEE	Aerosol and infected vectors	Low	1-6 days	Low
Ebola	Contact and aerosol	Moderate	4-16 days	Moderate to high
Botulinum Toxin	Ingestion and aerosol	No	Hours to days	High
T-2 Mycotoxins	Ingestion and aerosol	No	2-4 hours	Moderate
Ricin	Ingestion and aerosol	No	Hours to days	High
Staphylococcal Enterotoxin B	Ingestion and aerosol	No	Hours	<1%

Chemical Agents
Nerve Agents

Common Name (Military Symbol)	Tabun (GA)	Sarin (GB)	Soman (GD)	VX
Volatility/Persistency	Semi-persistent			Persistent
Rate of Action	Rapid			
Route of Entry	Respiratory and skin			
Odor	Fruity		Camphor	Sulfur
Signs/Symptoms	Headache, runny nose, salivation, pinpointing of pupils, difficulty in breathing, tight chest, seizures/convulsions			
Self-protection	Respiratory and skin			
First Aid	Remove from area, treat symptomatically Atropine and 2-Pam chloride			
Decontamination	Remove agent Flush with warm water/soap			
Non-persistent = minutes- hours				
Semi-persistent = <12 hours				
Persistent = >12 hours				

Blister Agents/Vesicants

Common Name (Military Symbol)	Mustard (H)	Lewisite (L)	Phosgene Oxime (CX)
Volatility/Persistency	Persistent		
Rate of Action	Delayed	Rapid	
Route of Entry	Skin, inhalation, eyes		
Odor	Garlic	Geraniums	Irritating
Signs/Symptoms	Red, burning skin, blisters, sore throat, dry cough. Pulmonary edema, memory loss, coma/seizures. Some symptoms may be delayed from 2 to 24 hrs.		
Self-protection	Respiratory and skin		
First Aid	Decontaminate with copious amount of water, remove clothing, support airway, treat symptomatically.		
Decontamination	Remove from area. Flush with warm water/soap.		
Non-persistent = minutes-hours			
Semi-persistent = <12 hours			
Persistent = >12 hours			

Blood Agents

Common Name (Military Symbol)	Hydrogen Cyanide (AC)	Cyanogen Chloride (CK)	Arsine (SA)
Volatility/Persistency	Non-persistent		
Rate of Action	Rapid		
Route of Entry	Skin, inhalation, eyes		
Odor	Burnt almonds and peach kernels	Garlic	
Signs/Symptoms	Cherry red skin/lips, rapid breathing, dizziness, nausea, vomiting, convulsions, dilated pupils, excessive salivation, gastrointestinal hemorrhage, pulmonary edema, respiratory arrest		
Self-protection	Respiratory and skin		
First Aid	Remove from area, assist ventilations, treat symptomatically, administer cyanide kit		
Decontamination	Remove from area, remove wet clothing, flush with soap and water, aerate		
Non-persistent = minutes-hours			
Semi-persistent = <12 hours			
Persistent = >12 hours			

Choking Agents

Common Name (Military Symbol)	Chlorine (CL)	Phosgene (CG)	Diphosgene (DP)
Volatility/Persistency	Non-persistent Vapors may hang in low areas		
Rate of Action	Rapid in high concentration, up to 3 hours in low concentrations.		
Route of Entry	Respiratory and skin		
Odor	Bleach	Newly mown hay	Cut grass or green corn
Signs/Symptoms	Eye and airway irritation, dizziness, tightness in chest, pulmonary edema, painful cough, nausea, headache.		
Self-protection	Respiratory and skin		
First Aid	Remove from area, remove contaminated clothing, assist ventilations, rest.		
Decontamination	Wash with copious amounts of water, aerate		
Non-persistent = minutes- hours Semi-persistent = <12 hours Persistent = >12 hours			