

CATEGORY A BIOLOGICAL AGENTS: SUMMARY SHEET

Agent	Symptoms	Admission keyword (syndrome keyword)	Incubation time (range)	Person-to-person transmission
Inhalational anthrax	Fever, malaise, chest pain, respiratory distress, shock	Pneumonia (PN), chest pain (CAD/CV), dyspnea / pulmonary embolism (PE), influenza-like illness (ILI), shock / sepsis (SEP), respiratory failure	1-6 days (<6 weeks)	None
Pneumonic plague	Pneumonia (cough, fever, dyspnea, chest pain) plus hemoptysis, cyanosis, GI symptoms, shock & blackened skin on hands and feet, respiratory failure	Pneumonia (PN), shock / sepsis (SEP), influenza-like illness (ILI)	2-3 days (<6 days)	Droplet aerosols
Pneumonic tularemia	Fever, chills, h/a, myalgias, rhinitis/coryza, sore throat → weakness, weight loss; chest pain, dry cough	Pneumonia (PN), influenza-like illness (ILI)	3-5 days (2-10 days)	None
Cutaneous anthrax	Painless skin bump → blister → blackened wound/scab; swollen LN; +/- fever	Insect bite (BITE, TICKS), skin infection / cellulitis (WOUND)	1-12 days	Direct contact with skin lesions may → cutaneous infection
Smallpox	Rash with fever that begins on face & extremities → blistering rash; h/a, N/V, back pain, confusion	Rash (DERM, INF)	12-14 days (7-17 days)	Airborne droplet nuclei or direct contact w/skin lesions or secretions until all scabs gone (3-4 weeks)
VHF	Fever with mucous membrane bleeding, petechiae	Gastroenteritis (GASTRO), sepsis (SEP)	Dependent on organism	Dependent on organism
Botulism	Bilateral descending flaccid paralysis beginning with cranial nerve palsies	Paralysis (NEURO), respiratory failure	Inhalation: 2-80 hours Food-borne: 2-72 hours (2-8 days)	None
GI Anthrax	Intestinal: fever, abdominal pain & swelling, N/V, flushed face, red conjunctivae, shock Oropharyngeal: fever, painful neck swelling + cervical LN, oral & pharyngeal ulcers → pseudomembrane development	Intestinal: gastroenteritis (GASTRO), abdominal pain (GNSURG) Oropharyngeal: pharyngitis (RESP)	1-7 days	None

References: (1) CDC (<http://emergency.cdc.gov/agent/agentlist-category.asp>); (2) NYC Department of Health & Mental Hygiene, City Health Information, Sept, 2007; (3) UNC Chapel Hill (<http://www.southernnevadahealthdistrict.org/download/epi/chart.pdf>); (4) USAMRIID *Medical Management of Biological Casualties Handbook* (4e), 2001

CHEMICAL AGENTS: SUMMARY SHEET

Agent	Symptoms	Admission keyword (syndrome keyword)	Onset	Exposure route
Nerve: Sarin, tabun, soman, cyclohexyl sarin, Novichok agents	Moderate exposure: diffuse muscle cramps, rhinorrhea, dyspnea, eye pain, dimmed vision, sweating, muscle tremors High exposure: above plus sudden loss of consciousness, seizures, flaccid paralysis	Poisoning (TOX), paralysis / seizure (NEURO), loss of consciousness	Aerosols: seconds to minutes Liquids: minutes to hours	Inhalation + dermal
Pulmonary/choking: phosgene, chlorine, diphosgene, chloropicrin, oxides of nitrogen, sulfur dioxide	Dyspnea, chest tightness, wheezing, laryngeal spasm, mucosal and dermal irritation & redness	Mucosal irritation, airway reactions & deep lung effects depend on the specific agent – ex. asthma (AST), smoke inhalation / inhalation injury (SI)	1-24 hours (rarely up to 72 hours); May be asymptomatic period of hours	Inhalation
Cyanides: hydrogen cyanide, cyanogen chloride	Moderate exposure: giddiness, palpitations, dizziness, N/V, h/a, eye irritation, drowsiness High exposure: loss of consciousness, convulsions	Poisoning (TOX), seizure (NEURO), loss of consciousness	Seconds to minutes	Inhalation + ingestion + dermal
Vesicants/blister: sulfur mustard, lewisite, nitrogen mustard, mustard lewisite, phosgene-oxime	Burning, itching, or red skin; tearing & burning redness of eyes; SOB, N/V	Dermatitis / rash (DERM), smoke inhalation / inhalation injury (SI)	Lewisite, minutes; Sulfur mustard, hours to days	Inhalation & dermal
Ricin	Ingestion: N/V/D, fever, abdominal pain Inhalation: chest tightness, coughing, weakness, nausea, fever	Ingestion: gastroenteritis (GASTRO), abdominal pain Inhalation: chest pain (CAD, CV), dyspnea / asthma exacerbation (AST), pneumonia (PN), influenza-like illness (ILI)	Ingestion: 18-24 hours Inhalation: 8-36 hours	Inhalation & ingestion
T-2 mycotoxins: Fusarium, Myrotecium, Trichoderma, Verticimonosporium, Stachybotrys	Blistering, blackened skin, blurred vision, eye irritation, tearing, N/V/D, abnormal muscle movements, coughing, SOB	Smoke inhalation / inhalation injury (SI), poisoning (TOX)	2-4 hours	Inhalation & dermal

References: (1) CDC (<http://emergency.cdc.gov/agent/agentlistchem-category.asp>); (2) UNC Chapel Hill (<http://healthvermont.gov/emerg/wallchart.pdf>); (4) USAMRICD Medical Management of Chemical Casualties Handbook (3e), 2000