Fact Sheet: Anthrax Information for Health Care Providers

Cause	*Bacillus anthracis* • Encapsulated, aerobic, gram-positive, spore-forming, rod-shaped (bacillus) bacterium
Systems Affected	• Skin or cutaneous (most common) • Respiratory tract or inhalation (rare) • Gastrointestinal (GI) tract (rare) • Oropharyngeal form (least common)
Transmission	• Skin: direct skin contact with spores; in nature, contact with infected animals or animal products (usually related to occupational exposure) • Respiratory tract: inhalation of aerosolized spores • GI: consumption of undercooked or raw meat products or dairy products from infected animals • NO person-to-person transmission of inhalation or GI anthrax
Reporting	• Report suspected or confirmed anthrax cases immediately to your local or state department of health.

Cutaneous Anthrax

Incubation Period	• Usually an immediate response up to 1 day
Typical Signs/Symptoms	• Local skin involvement after direct contact with spores or bacilli • Localized itching followed by 1) papular lesion that turns vesicular and 2) subsequent development of black eschar within 7–10 days of initial lesion
Treatment **(See "Cutaneous Anthrax Treatment Protocol" for specific therapy*)**	• Obtain specimens for culture BEFORE initiating antimicrobial therapy. • Do NOT use extended-spectrum cephalosporins or trimethoprim/sulfamethoxazole because anthrax may be resistant to these drugs.
Precautions	• Standard contact precautions. Avoid direct contact with wound or wound drainage.

* http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5042a1.htm

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Inhalation Anthrax

Incubation Period	• Usually <1 week; may be prolonged for weeks (up to 2 months)	
Typical Signs/Symptoms **(often biphasic, but symptoms may progress rapidly)**	**Initial phase** • Non-specific symptoms such as low-grade fever, nonproductive cough, malaise, fatigue, myalgias, profound sweats, chest discomfort (upper respiratory tract symptoms are rare) • Maybe rhonchi on exam, otherwise normal • Chest X-ray: o mediastinal widening o pleural effusion (often) o infiltrates (rare)	**Subsequent phase** • 1–5 days after onset of initial symptoms • May be preceded by 1–3 days of improvement • Abrupt onset of high fever and severe respiratory distress (dyspnea, stridor, cyanosis) • Shock, death within 24–36 hours
Laboratory	• Coordinate all aspects of testing, packaging, and transporting with public health laboratory/Laboratory Response Network (LRN). • Obtain specimens appropriate to system affected: o blood (essential) o pleural fluid o cerebral spinal fluid (CSF) o skin lesion	**Clues to diagnosis** • Gram-positive bacilli on unspun peripheral blood smear or CSF • Aerobic blood culture growth of large, gram-positive bacilli provides preliminary identification of *Bacillus* species.
Treatment **(See "Inhalational Anthrax Treatment Protocol"* for specific therapy)**	• Obtain specimens for culture BEFORE initiating antimicrobial therapy. • Initiate antimicrobial therapy immediately upon suspicion. • Do NOT use extended-spectrum cephalosporins or trimethoprim/sulfamethoxazole because anthrax may be resistant to these drugs. • Supportive care including controlling pleural effusions	
Precautions	• Standard contact precautions	

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Gastrointestinal Anthrax

Incubation Period	• Usually 1–7 days	
Typical Signs/Symptoms	**Initial phase** • Nausea, anorexia, vomiting, and fever progressing to severe abdominal pain, hematemesis, and diarrhea that is almost always bloody • Acute abdomen picture with rebound tenderness may develop. • Mesenteric adenopathy on computed tomography (CT) scan likely. Mediastinal widening on chest X-ray has been reported.	**Subsequent phase** • 2–4 days after onset of symptoms, ascites develops as abdominal pain decreases. • Shock, death within 2–5 days of onset
Laboratory	• Coordinate all aspects of testing, packaging, and transporting with public health laboratory/LRN. • Obtain specimens appropriate to system affected: o blood (essential) o ascitic fluid	**Clues to diagnosis** • Gram-positive bacilli on unspun peripheral blood smear or ascitic fluid • Pharyngeal swab for pharyngeal form • Aerobic blood culture growth of large, gram-positive bacilli provides preliminary identification of *Bacillus* species.
Treatment **(See "Inhalational Anthrax Treatment Protocol"* for specific therapy)**	• Obtain specimens for culture BEFORE initiating antimicrobial therapy. • Early (during initial phase) antimicrobial therapy is critical. • Do **NOT** use extended-spectrum cephalosporins or trimethoprim/sulfamethoxazole because anthrax may be resistant to these drugs.	
Precautions	• Standard precautions	

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Oropharyngeal Anthrax

Incubation Period	• Usually 1–7 days	
Typical Signs/Symptoms	**Initial phase** • Fever and marked unilateral or bilateral neck swelling caused by regional lymphadenopathy • Severe throat pain and dysphagia • Ulcers at the base of the tongue, initially edematous and hyperemic	**Subsequent phase** • Ulcers may progress to necrosis • Swelling can be severe enough to compromise the airway
Laboratory	• Coordinate all aspects of testing, packaging, and transporting with public health laboratory/LRN. • Obtain specimens appropriate to system affected: o blood (essential) o throat	**Clues to diagnosis** • Aerobic blood culture growth of large, gram-positive bacilli provides preliminary identification of *Bacillus* species.
Treatment **(See "Inhalational Anthrax Treatment Protocol"* for specific therapy)**	• Obtain specimens for culture BEFORE initiating antimicrobial therapy. • Do **NOT** use extended-spectrum cephalosporins or trimethoprim/sulfamethoxazole because anthrax may be resistant to these drugs. • Supportive care including controlling ascites	
Precautions	• Standard contact precautions	

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