

Transmission Routes of Potential Bioterrorism Agents

Inhalational

These agents can be transmitted through the air. It is thought that a bioterrorist attack will most likely involve inhalational exposure.

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| <ul style="list-style-type: none"> # Anthrax
<i>Bacillus anthracis</i> # Botulism
<i>Clostridium botulinum</i> toxin # Plague
<i>Yersinia pestis</i> # Tularemia
<i>Francisella tularensis</i> | <ul style="list-style-type: none"> # Brucellosis
<i>Brucella</i> spp. # Glanders
<i>Burkholderia mallei</i> # Melioidosis
<i>Burkholderia pseudomallei</i> # Psittacosis
<i>Chlamydochloa psittaci</i> | <ul style="list-style-type: none"> # Q Fever
<i>Coxiella burnetii</i> # Toxins
<i>Clostridium perfringens</i>
<i>Ricinus communis</i>
<i>Staph. aureus</i> |
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Vector

These agents can be transmitted by an arthropod vector.

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| <ul style="list-style-type: none"> # Fleas <ul style="list-style-type: none"> # Plague
<i>Yersinia pestis</i> # Lice <ul style="list-style-type: none"> # Typhus
<i>Rickettsia prowazekii</i> | <ul style="list-style-type: none"> # Ticks <ul style="list-style-type: none"> # Tularemia
<i>Francisella tularensis</i> # Q Fever
<i>Coxiella burnetii</i> | <ul style="list-style-type: none"> # Mosquitoes <ul style="list-style-type: none"> # Tularemia
<i>Francisella tularensis</i> # Viral encephalitis
VEE, EEE, WEE # West Nile Fever virus # Rift Valley Fever virus |
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Direct Contact

These agents can be acquired by directly touching a person or animal or by contact with fluids (urine, feces, vomit, saliva) or tissues from an infected person or animal.

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| <ul style="list-style-type: none"> # Anthrax
<i>Bacillus anthracis</i> # Plague
<i>Yersinia pestis</i> # Smallpox
<i>Variola major</i> # Tularemia
<i>Francisella tularensis</i> | <ul style="list-style-type: none"> # Brucellosis
<i>Brucella</i> spp. # Glanders
<i>Burkholderia mallei</i> # Melioidosis
<i>Burkholderia pseudomallei</i> # Q Fever
<i>Coxiella burnetii</i> | <ul style="list-style-type: none"> # Nipah Virus # Hendra Virus # Rift Valley Fever
<i>Phlebovirus</i> |
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Respiratory Contact

These agents may be spread from person to person by respiratory contact (e.g., sneezing or coughing).

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| <ul style="list-style-type: none"> # Plague
<i>Yersinia pestis</i> # Smallpox
<i>Variola major</i> | <ul style="list-style-type: none"> # Viral Hemorrhagic Fever # Glanders
<i>Burkholderia mallei</i> |
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Food

These agents can potentially be spread through a food source (ingestion). Many agents are killed by heat and therefore proper cooking measures can help to prevent disease through this route.

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| <ul style="list-style-type: none"> # Anthrax
<i>Bacillus anthracis</i> # Botulism
<i>Clostridium botulinum</i> toxin # Tularemia
<i>Francisella tularensis</i> | <ul style="list-style-type: none"> # Brucellosis
<i>Brucella</i> spp. # Toxins
<i>Clostridium perfringens</i>
<i>Ricinus communis</i>
<i>Staph. aureus</i> | <ul style="list-style-type: none"> # Food Safety
<i>Salmonella</i> spp.
<i>E. coli</i> O157:H7
<i>Campylobacter</i> spp. |
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Water

These agents can potentially be spread through a water source. This includes contact with contaminated water (e.g., open wounds) as well as drinking contaminated water.

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| <ul style="list-style-type: none"> # Melioidosis
<i>Burkholderia pseudomallei</i> # Tularemia
<i>Francisella tularensis</i> | <ul style="list-style-type: none"> # Toxins
<i>Clostridium perfringens</i>
<i>Ricinus communis</i>
<i>Staph. aureus</i> | <ul style="list-style-type: none"> # Brucellosis
<i>Brucella</i> spp. # Water Safety
<i>Cryptosporidium parvum</i>
<i>Vibrio cholerae</i> |
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Note: Bioterrorism pathogens may have atypical routes of transmission and clinical manifestations. The agents are listed by currently known means of transmission. Much is still to be learned about many of the agents so other routes may be possible.

If you suspect a poisoning exposure from any bioterrorism agent, immediately contact your local county health department, and the Illinois Poison Center at 1-800-222-1222.