

Yale *Environmental Health & Safety*

Klebsiella pneumoniae

K. pneumoniae

K. pneumoniae is a risk group 2 bacterium. It is considered a **reproductive pathogen** as it may increase risk of miscarriage, preterm premature rupture of membranes, acute chorioamnionitis, and intrauterine fetal demise. Infections in both males and females can also result in infertility.

How can I be exposed to *K. pneumoniae*?

- Transmission typically occurs through skin contact with environmentally contaminated surfaces and/or objects.
- Laboratory workers may be exposed by ingestion, direct contact of mucous membranes with contaminated objects, inhalation of airborne secretions, and parenteral inoculation.

How can I protect myself from exposure?

- Avoid direct skin contact by wearing protective clothing and gloves.
- Avoid mucous membrane exposure by using eye/face protection for procedures that may produce splashes.
- Avoid respiratory exposure by using a biosafety cabinet or other primary containment device and wearing a respirator for procedures that may produce aerosols.
- The use of needles, syringes, and other sharp objects should be strictly limited, and additional precautions should be taken when working with animals.

What should I do if I think I've been exposed to *K. pneumoniae*?

Wash the affected area immediately for 15 minutes with soap and water and seek medical attention.

What symptoms should I look for after a potential exposure?

Respiratory disease symptoms, resulting in nosocomial pneumonia and lung abscesses, include fevers, chills, increased white blood cells, and red currant jelly-like sputum. In

case of meningitis and brain abscesses, symptoms include headaches, fever, altered consciousness, seizures, and septic shock. For infections affecting the liver, symptoms include fever, nausea, vomiting, diarrhea, and abdominal pain.

How long does it take for symptoms to develop?

Symptoms may develop between 1 to 6 weeks.

Is there a treatment or vaccine?

Antibiotic therapy can be used as a treatment. There is currently no vaccine to prevent infection.

Can I transmit it to other people?

Yes, it is commonly transmitted between people via contaminated hands and objects.

Can I transmit it to my pets?

Yes, humans and companion animals have been found to be infected with the same strains of *K. pneumoniae*.

Can it survive on surfaces?

Yes, *K. pneumoniae* survives well on surfaces of vegetables, wood, and sawdust. It can survive for extended periods of time in soil, water, and sewage.

See *Pathogen Safety Data Sheet for Klebsiella spp.* for More Information

