

# *Burkholderia pseudomallei*

The gram-negative bacillus *Burkholderia pseudomallei* is a saprophyte and the cause of melioidosis. Melioidosis develops after bacterial inoculation or inhalation. Symptoms of melioidosis may be exhibited many years after exposure.

## Symptoms

- **Localized Infection:** Localized pain or swelling, fever, ulceration, abscess
- **Pulmonary Infection:** Cough, chest pain, high fever, headache, anorexia
- **Bloodstream Infection:** Fever, headache, respiratory distress, abdominal discomfort, joint pain, muscle tenderness, disorientation
- **Disseminated Infection:** Fever, weight loss, stomach or chest pain, muscle or joint pain, headache, seizures

**Risk Assessment:** Major risk factors are diabetes, liver disease, renal disease, thalassemia, cancer or another immune-suppressing condition not related to HIV, chronic lung disease (such as cystic fibrosis, chronic obstructive pulmonary disease (COPD) and bronchiectasis).

- **High Risk:** The presence of any predisposing condition without proper personal protective equipment (PPE), including diabetes mellitus, chronic liver or kidney disease, alcohol abuse, long-term steroid use, hematologic malignancy, neutropenia or neutrophil dysfunction, chronic lung disease (including cystic fibrosis), thalassemia, or any other form of immunosuppression; needle stick or other penetrating injury with implement contaminated with *B. pseudomallei*; bite or scratch by experimental animal infected with *B. pseudomallei*; splash event leading to contamination of mouth or eyes; generation of aerosol outside biologic safety cabinet (e.g., sonication, centrifuge incident).
- **Low Risk:** Inadvertent opening of the lid of an agar plate growing *B. pseudomallei* outside a biologic safety cabinet; inadvertent sniffing of agar plate growing *B. pseudomallei*; splash event leading to visible contact of *B. pseudomallei* with gloved hand or protected body; spillage of small volume of liquid culture (<1mL) within a functioning biologic safety cabinet; contamination of intact skin with culture.

**Laboratory employees may be exposed to aerosols and infectious droplets if using automated biochemical systems, manual multi-test kits or single biochemical tests for identifications outside of a bio-safety cabinet.**

**Post-exposure Monitoring (PEM):** An exposed worker should be instructed to seek medical attention if he or she becomes ill and to mention the possible exposure event. [http://wwwnc.cdc.gov/eid/article/14/7/07-1501\\_article.htm](http://wwwnc.cdc.gov/eid/article/14/7/07-1501_article.htm)

**Reference:** <http://wwwnc.cdc.gov/eid/article/14/7/07-1501-t1.htm>; <http://www.cdc.gov/melioidosis/treatment/index.html>; <http://www.cdc.gov/melioidosis/symptoms/index.html>

**Referred cultures confirmed by the Illinois Department of Public Health (IDPH) laboratories must be reported to the U.S. Centers for Disease Control and Prevention (CDC) by IDPH and by the submitting laboratory.**

- Each facility will complete APHIS/CDC Form 4, which is to be sent to CDC within seven calendar days of the identification of the select agent.
- If an exposure has occurred, the facility must complete APHIS/CDC Form 3. Form 3 must be sent to CDC within seven calendar days of the identification of the select agent.
- Forms and instructions are available at [www.selectagents.gov](http://www.selectagents.gov).

For questions concerning testing or reporting, contact the Illinois Department of Public Health Division of Laboratories.

IDPH Springfield Laboratory, Clinical Microbiology, 217-782-6562  
IDPH Chicago Laboratory, Clinical Microbiology, 312-793-4760  
IDPH Carbondale Laboratory, Clinical Microbiology, 618-457-5131