

# GRAM NEGATIVE BACTEREMIA

APPROPRIATE TREATMENT DURATION:

**7 DAYS**

in **UNCOMPLICATED** gram negative bacteremia.



**Examples of UNCOMPLICATED bacteremia include:**

- No underlying deep seated infection (i.e. endovascular, bone, joint, or CNS involvement)
- No major immunocompromising condition
- Clinical improvement within 48 to 72 hours
- Source control achieved

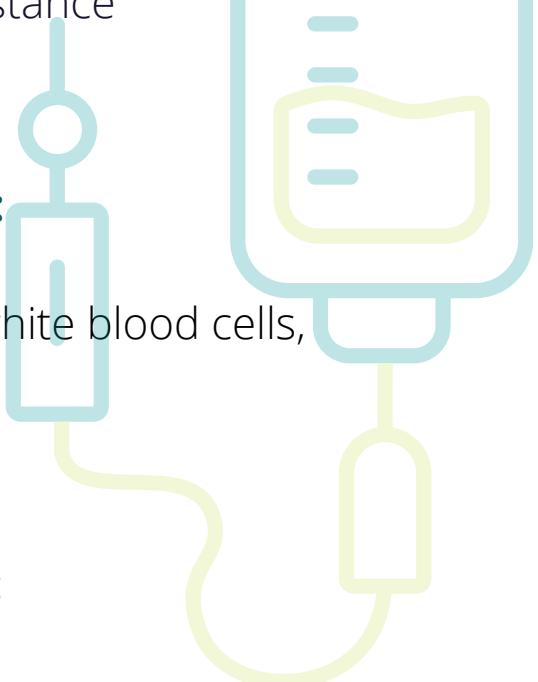
**Shorter durations are associated with better outcomes:**

- Decreased risk of adverse drug events
- Decreased development of antimicrobial resistance
- Shorter hospital stays
- Decreased cost to the healthcare system



**Patients are eligible for IV to PO stepdown if:**

- Uncomplicated bacteremia
- Clinically improving (i.e. afebrile, normalizing white blood cells, hemodynamically stable)
- Able to tolerate and absorb oral medications
- Oral antibiotic has excellent bioavailability



**Repeat blood cultures UNNECESSARY unless:**

- Patient remains febrile
- Patient is not clinically improving
- Source control has not been assured



**Antimicrobial  
Stewardship Program**



**Saskatchewan  
Health Authority**

# GRAM NEGATIVE BACTEREMIA

Gram negative bacteria account for ~25-50% of blood stream infections.

**Mortality rates range from 12% to 38% in patients with gram negative bacteremia, and may be highest in patients with:**

- Disseminated intravascular coagulation (DIC)
- Acute respiratory distress syndrome (ARDS)
- Presence of a central venous catheter
- Inappropriate antibiotic treatment
- Unknown origin of infection
- Septic shock
- Anuria

## Most Common Pathogens:

- Escherichia coli*
- Klebsiella pneumonia*
- Enterobacter spp.*
- Serratia marcescens*
- Pseudomonas aeruginosa*

## Risk Factors:

- Central venous catheters,
- Immunosuppression,
- Diabetes, Hemodialysis,
- Prostate Biopsy,
- Healthcare Exposure

## Common Sources of Infection:

Urinary tract infections, intra-abdominal infections (cholangitis, colitis, peritonitis, abscess), central venous catheters, pneumonia (hospital and ventilator-associated)

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