

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



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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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