

Listeria spp (LTR79359)

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Organism
Listeria spp.

- *L. monocytogenes*

Clinical

These organisms are widely distributed in nature, especially in soil and decaying vegetable matter.

L. monocytogenes – may cause septicemia, meningitis, encephalitis, and brain abscesses usually in immunocompromised/debilitated patients. This organisms has also been associated with endocarditis, pericarditis, arthritis, osteomyelitis, intra-abdominal abscess, endophthalmitis, keratitis, peritonitis, cholecystitis, intravenous catheter and pleuropulmonary infections. In pregnant women, it may lead to bacteremia resulting in amnionitis and infection of the fetus (neonatal sepsis and/or meningitis). Prolonged treatment (3 weeks) is necessary for meningitis to avoid recurrences. *L. monocytogenes* may also cause sporadic or epidemic food poisoning following exposure to contaminated foods.

**Usual
susceptibility
pattern**

This organism is resistant to all cephalosporins and quinolones (exception - moxifloxacin exhibits good in vitro bactericidal activity against *L. monocytogenes* but clinical efficacy has not been established and this agent is not currently recommended). Resistance to macrolides, and tetracyclines has been reported. *L. monocytogenes* is usually susceptible to TMP-SMX and gentamicin, although gentamicin has no activity against intracellular organisms. It is susceptible to penicillin and ampicillin. Although meropenem appears susceptible in vitro, clinical failures have been documented. Linezolid exhibits bacteriostatic activity and has been used as salvage therapy for endocarditis but experience is limited. Vancomycin has been associated with poor clinical outcomes. Daptomycin is not recommended.

**Susceptibility
method**

Etest method using Mueller-Hinton agar with 5% sheep blood incubated in 5% CO₂ at 35°C for 20-24 hours. Incubation should be prolonged for 48 hours for slow growing organisms.

Note: For Etest, use 1.0 McFarland suspension in broth.

Listeria spp., Continued

Susceptibility reporting

	Blood/Sterile Body Site	Comments
Ampicillin	✓	See Special Considerations
Meropenem	*	*Physician request only See Special Considerations
TMP-SMX	✓	See Special Considerations

Note

All isolates, add comment:

“This organism is resistant to cephalosporins.” (free text)

CSF isolates, add comment:

“Listeria meningitis requires prolonged therapy to prevent recurrences.”
&Lis2

Notify Infection Control and/or Public Health.

Special considerations

<u>Ampicillin/</u> <u>Meropenem/</u> <u>TMP-SMX:</u>	This organism should be susceptible to these antibiotics. Consult microbiologist if I/R. If I/R, the identification of the organisms and its susceptibility need to be confirmed by repeat testing. If confirmed, consider submitting isolate to a reference laboratory.
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Interpretation

For Etest, report actual MIC result. For interpretation (S, I, or R) report according to the nearest higher doubling dilution (**Appendix 1**).

Use CLSI interpretive document for **Listeria monocytogenes**.