



Don't Let the Bug Beat You: *E. casseliflavus* and *E. gallinarum*

Vancomycin-Resistant Enterococci (VRE) are deemed a serious threat by the Centers for Disease Control and Prevention.¹ Most VRE are *Enterococcus faecium*, which is often also resistant to penicillins, making daptomycin and linezolid common treatment options for invasive infections. However, what about VRE that is NOT *E. faecium*?

Which enterococci are VRE besides *E. faecium*?

Vancomycin resistance in *Enterococcus spp.* is mediated by resistance genes that decrease the binding affinity of vancomycin to peptidoglycan, the structural unit of cell walls. In *E. faecalis* and *E. faecium* the specific resistance genes are *vanA* and *vanB*, which are transferable between bacteria making them concerns in infection prevention. In *Enterococcus casseliflavus* and *Enterococcus gallinarum* resistance is mediated by the *vanC* gene which is constitutively encoded, meaning vancomycin resistance is intrinsic and not transferable.² *E. casseliflavus* and *E. gallinarum* are relatively uncommon pathogens, which makes them underrecognized for their clinically relevant intrinsic vancomycin resistance. These pathogens should always be reported as vancomycin resistant by the microbiology laboratory, regardless of their vancomycin minimum inhibitory concentration.³

How should VRE be treated?⁴

VRE treatment depends on the specific species of *Enterococcus*. Invasive infections by *E. faecium* are likely to require daptomycin or linezolid since penicillin resistance rates are high. However, VRE infections caused by *E. faecalis*, *E. casseliflavus*, and *E. gallinarum* are highly likely to be susceptible to penicillins, which should be the first line therapy in most cases. Other [antibiotics with activity against enterococci](#) can also be considered when guided by antibiotic susceptibility testing.

Key Takeaway: *Enterococcus casseliflavus* and *Enterococcus gallinarum* are always resistant to vancomycin. *Enterococcus faecalis* can be vancomycin resistant, but this is uncommon. All three are typically susceptible to penicillins, so broader spectrum agents (e.g. daptomycin and linezolid) can often be preserved.

References:

1. CDC. Antibiotic Resistance Threats in the United States, 2019. Atlanta, GA: U.S. Department of Health and Human Services, CDC; 2019
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3. Clinical and Laboratory Standards Institute. M100: performance standards for antimicrobial susceptibility testing. 35 ed. 2025
4. Miller WR, Arias CA, Murray BE. *Enterococcus* Species, *Streptococcus gallolyticus* Group, and *Leuconostoc* Species. In: Bennett JE, Dolin R, Blaser MJ, ed. *Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases*. 9th ed. Philadelphia, PA: Elsevier; 2020:194-210.