

Korea have a notably higher resistance rate (17%). Clindamycin was historically effective against members of the *B. fragilis* group, but rates of resistance have increased to 30–43% in the United States and are >80% in some parts of the world. Furthermore, metronidazole is effective against many different anaerobic organisms and is considered a first-line agent for many anaerobic infections worldwide, but, in a population of Colombian patients with refractory periodontitis, 45% of *Fusobacterium* isolates and 25% of *Prevotella* and *Porphyromonas* strains were resistant to metronidazole; this finding underscores the importance of understanding the local antibiogram and of assessing susceptibility profiles in refractory disease.

Empirical Therapy Not every anaerobe isolated must be specifically targeted by the antibiotic regimen. Given that infections involving anaerobes are typically polymicrobial, that the cultivation and identification of anaerobes are challenging (i.e., not all organisms may be recovered), and that organisms often depend on one another for persistence, clinical resolution of the infection is often achieved with empirical antibiotics targeting the bulk of the organisms recovered. Antibiotics that demonstrate no useful activity against anaerobes include aminoglycosides, monobactams, and trimethoprim-sulfamethoxazole. With the caveat that susceptibility profiles may change with time and geography, the antibiotics that are commonly used as empirical therapy against anaerobic bacteria include metronidazole, β -lactam/ β -lactamase inhibitor combinations, clindamycin, carbapenems, and chloramphenicol (**Table 177-2**).

TABLE 177-2 Antimicrobial Therapy That Is Typically Active Against Commonly Encountered Anaerobes