

vancomycin) to inhibit new toxin synthesis in the treatment of streptococcal or staphylococcal toxic shock syndrome. Other uses include treatment of infections caused by *Capnocytophaga canimorsus*, combination therapy for babesiosis and occasionally malaria, and therapy for toxoplasmosis. Clindamycin has excellent oral bioavailability. Adverse effects include nausea, vomiting, diarrhea, *C. difficile*–associated diarrhea and pseudomembranous colitis, maculopapular rash, and rarely Stevens-Johnson syndrome.

■ TETRACYCLINES

The older (doxycycline, minocycline, and tetracycline) and newer (tigecycline, eravacycline, and omadacycline) tetracyclines inhibit protein synthesis and are bacteriostatic. These drugs have wide clinical uses. They are used in the treatment of skin and soft tissue infections caused by gram-positive cocci (including MRSA), spirochetal infections (e.g., Lyme disease, syphilis, leptospirosis, and relapsing fever), rickettsial infections (e.g., Rocky Mountain spotted fever, scrub typhus), atypical pneumonia, sexually transmitted infections (e.g., *Chlamydia trachomatis* infection, lymphogranuloma venereum, and granuloma inguinale), infections with *Nocardia* and *Actinomyces*, brucellosis, tularemia, Whipple's disease, and malaria. Tigecycline is a glycylcycline derived from minocycline and is available only in IV formulation. It is indicated in the treatment of complicated skin and soft tissue infections, complicated intraabdominal infections, and community-acquired bacterial pneumonia in adults. Tigecycline has activity against MRSA, vancomycin-sensitive enterococci, many Enterobacterales, and *Bacteroides* species; it has no activity against *P. aeruginosa*. This drug has been used in combination with colistin for the treatment of serious infections with multidrug-resistant gram-negative organisms. A pooled analysis of 13 clinical trials found an increased risk of death and treatment failure among patients given tigecycline alone; as a result, the FDA mandated a black box warning. Eravacycline is a fluorocycline derivative available in IV formulation with a similar spectrum but more potent than tigecycline in vitro. It has been approved for complicated intraabdominal infections. Omadacycline is an aminomethylcycline derivative available in both IV and oral