

SECTION 9 SPIROCHETAL DISEASES

206 Syphilis

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DEFINITION

Syphilis, a chronic systemic infection caused by *Treponema pallidum* subspecies *pallidum*, is usually sexually transmitted and is characterized by episodes of active disease interrupted by periods of latency. After an incubation period averaging 2–6 weeks, a primary lesion appears—often associated with regional lymphadenopathy—that resolves without treatment. The secondary stage, associated with generalized mucocutaneous lesions and generalized lymphadenopathy, is followed by a latent period of subclinical infection lasting years or decades. Central nervous system (CNS) involvement may occur early in infection and may be symptomatic or asymptomatic. In the preantibiotic era, about one-third of patients

with untreated cases developed the tertiary stage, characterized by progressive destructive mucocutaneous, musculoskeletal, or parenchymal lesions; aortitis; or late CNS manifestations.

ETIOLOGY

The Spirochaetales include four genera that are pathogenic for humans and for a variety of other animals: *Leptospira* species, which cause leptospirosis (Chap. 208); *Borrelia* species, which cause relapsing fever and Lyme disease (Chaps. 209 and 210); *Brachyspira* species, which cause intestinal infections; and *Treponema* species, which cause the diseases known collectively as *treponematoses* (see also Chap. 207e). The *Treponema* species include *T. pallidum* subspecies *pallidum*, which causes venereal syphilis; *T. pallidum* subspecies *pertenue*, which causes yaws; *T. pallidum* subspecies *endemicum*, which causes endemic syphilis or bejel; and *T. carateum*, which causes pinta. Until recently, the subspecies were distinguished primarily by the clinical syndromes they produce. Researchers have now identified molecular signatures