

# McCance: Pathophysiology, 6th Edition

## Chapter 24: Sexually Transmitted Infections

### Key Points – Print

#### SUMMARY REVIEW

##### Sexually Transmitted Urogenital Infections

1. Gonorrhea is a sexually transmitted communicable disease that can be local or systemic. Complications include PID; sterility; and disseminated infection, which is spread through the bloodstream to the skin, joints, and heart.
2. Gonorrhea passed to the fetus from the mother typically manifests as an eye infection and develops 1 to 12 days after birth. Usually ophthalmic antibiotic prophylaxis is not sufficient to prevent infection.
3. Antibiotic coverage for penicillin-resistant strains and chlamydial coinfection is recommended for all individuals diagnosed with gonorrhea and their partners.
4. Syphilis is an STI that becomes systemic shortly after infection. The four stages of the disease are (a) primary syphilis with a chancre at the site of infection; (b) secondary syphilis with systemic spread to all body systems; (c) latent syphilis with minimal symptoms or the development of skin lesions; and (d) tertiary syphilis, the most severe stage, with destruction of bone, skin, and soft and neurologic tissues.
5. Congenital syphilis contributes to prematurity of the newborn with bone marrow depression, CNS involvement, renal failure, and intrauterine growth retardation. Late clinical manifestations are those of tertiary syphilis and are rare.
6. Syphilis is diagnosed by serologic testing and treated with injectable penicillin. Sexual partners are treated also.
7. With chancroid infection, women are generally asymptomatic and men may develop inflamed, painful genital ulcers and inguinal buboes. Incubation period is 1 to 14 days. Single-dose therapy with injectable ceftriaxone or oral azithromycin for both partners is recommended. Persons with HIV may require a longer treatment regimen.
8. Granuloma inguinale (donovanosis) is rare in the United States. The bacteria are gram negative and survive within macrophages. Localized nodules coalesce to form granulomas and ulcers on the penis in men and labia in women. Antibiotics provide effective treatment. Although rare and mildly infectious, granuloma inguinale is a chronic, progressively destructive bacterial infection. Often individuals diagnosed with granuloma inguinale are coinfecting with syphilis.
9. BV is a sexually associated condition caused by an overgrowth of anaerobic bacteria that produce aromatic amines and raise the pH of the vagina, promoting further bacterial growth (without an inflammatory response) and a fishy odor. “Clue cells” are found on the wet mount. Metronidazole (Flagyl) provides effective treatment. BV has been associated with PID,

chorioamnionitis, preterm labor, and postpartum endometritis. Treatment of male sexual partners is not recommended.

10. Chlamydia is the most common bacterial STI in the United States and the leading preventable cause of infertility and ectopic pregnancy. The causative organism, *C. trachomatis*, localizes to epithelial tissue and can spread throughout the urogenital tract or pass from infected mother to the eyes and respiratory tract of newborn infants during birth. As with gonorrhea, prophylactic eye antibiotic treatment is insufficient to prevent infection. *C. trachomatis* is susceptible to inexpensive, readily accessible antibiotics. Single-dose azithromycin is the drug of choice. Antibiotic therapy for infected individuals and all sexual contacts is recommended. Because of the asymptomatic nature of chlamydia and the potential sequelae of untreated infection, extensive and widespread screening is warranted.
11. Lymphogranuloma venereum is a chronic STI that is uncommon in the United States. The lesion begins as a skin infection and spreads to the lymph tissue, causing inflammation, necrosis, buboes, and abscesses of the inguinal lymph nodes. Primary lesions appear on the penis and scrotum in men and on the cervix, vaginal wall, and labia in women. Secondary lesions involve inflammation and swelling of the lymph nodes with formation of large blue buboes that rupture and form draining ulcerative lesions. A 21-day course of oral doxycycline or erythromycin is effective. Treatment of sexual partners is recommended.
12. Genital herpes is the most common genital ulceration in the United States and is caused by either HSV-1 or HSV-2. Lesions initially appear as groups of vesicles that progress to ulceration with pain, lymphadenopathy, and fever. Herpes simplex virus passes from mother to fetus and can cause spontaneous abortion or prematurity. Acyclovir reduces symptoms but does not cure the disease.
13. Three distinct syndromes are associated with HSV infection: (a) first-episode primary infections, (b) first-episode nonprimary infections, and (c) recurrent infections. Recurrent infections are most often attributable to HSV-2 and are generally milder and of shorter duration.
14. HPV is associated with the development of cervical dysplasia and cancer as well as condylomata acuminata. The high-risk strains of HPV (HR-HPV) that are precursors to the development of cervical cancer do not cause genital warts. Testing is available to detect HR-HPV, as well as a vaccine for HPV types 16 and 18, which have the highest risk for cervical cancer.
15. Condylomata acuminata (genital warts) are associated with multiple sexual partners and are highly contagious. The velvety cauliflower-like lesions occur in the genital and anal areas, vagina, and cervix and are painless. They can be transmitted to the infant at birth.
16. Molluscum contagiosum is a benign viral infection of the skin. It is transmitted by skin-to-skin contact in children and adults. In adults it tends to occur on the genitalia and to be transmitted by sexual contact.
17. Trichomoniasis (*T. vaginalis*) causes vaginitis in women, and urethritis in men. Both partners usually are infected. Women usually have a copious, malodorous, gray-green

discharge with pruritus. Men usually are asymptomatic. Metronidazole is the treatment for both partners.

18. Scabies is a common parasitic infection that can be spread by skin-to-skin contact and sexual contact. The scabies mite burrows through the skin, depositing two or three large eggs per day. Intense pruritus, especially at night, is the most pronounced clinical manifestation. Treatment consists of topical application of a pediculicide.
19. Pediculosis pubis (crabs) is commonly transmitted sexually and is caused by the crab louse, *P. pubis*. The lice bite into the skin for nutrition. Symptoms include mild and severe pruritus. Topical application of prescription or over-the-counter pediculicides is effective treatment.

### Sexually Transmitted Infections of Other Body Systems

1. Various enteric bacterial pathogens are now recognized as being sexually transmitted, particularly among homosexual men. The infections include shigellosis, *Campylobacter* enteritis, giardiasis, amebiasis, and hepatitis A.
2. Shigellosis is transmitted by contact with infected feces. *Campylobacter* enteritis can be transmitted through anal-oral sexual practices.
3. Giardiasis and amebiasis are transmitted primarily through contaminated drinking water, but they can be transmitted by anal-oral and genital-anal contact.
4. Transmission of HBV can occur through needle puncture, blood transfusion, cuts in the skin, and contact with infected body fluids.
5. Hepatitis B infection poses significant health risks including chronic liver disease and hepatocellular cancer. Immunization against hepatitis B is the most effective means of preventing transmission. Universal vaccination of infants and children is recommended, as well as vaccination of high-risk adults.
6. Perinatal transmission of HBV is relatively common.
7. Hepatitis C is generally transmitted percutaneously but sexual transmission appears possible.
8. Systemic diseases known to be sexually transmitted include AIDS (see [Chapter \[AU1\]8](#)), cytomegalovirus infection, and Epstein-Barr virus.
9. Epstein-Barr virus may be harbored in the genital tract and passed on through sexual encounters.
10. CMV is a sexually transmissible herpesvirus. The infection causes no specific genital disease, but its incidence is high in individuals being treated for other STIs. The virus is found in semen, cervical secretions, urine, blood, saliva, breast milk, and stool.
11. CMV infection is more common in homosexual men and in young women with multiple sexual partners. It is the most common congenital infection.
12. CMV infection can cause mononucleosis, pneumonitis, hemolytic anemia, and thrombocytopenia purpura. A CMV infection in an immunosuppressed individual can cause a life-threatening illness. No treatment is indicated in most cases of CMV infection.