**Syphilis**
End of Module Quiz (10 Questions)

1. Which of the following statements about the characteristics of *Treponema pallidum*, the causative agent of syphilis, is true?
   A. *T. pallidum* lives naturally outside of the human body.
   B. *T. pallidum* is a corkscrew-shape multi-celled protozoa organism.
   C. *T. pallidum* can be grown in cultures in the laboratory.
   D. *T. pallidum* can only be grown in the laboratory in the testicles of rabbits.  
      (Correct)

**Incorrect Answer Response:** Syphilis is a systemic disease caused by a corkscrew-shaped bacterium called *Treponema pallidum*. *Treponema pallidum* does not naturally live or cause disease outside the human body. *Treponema pallidum* poses special challenges in the laboratory. The organism cannot be grown in cultures because all its growth requirements are not understood. As a result, *T. pallidum* is grown in the testicles of rabbits, a technique developed decades ago and one that is quite cumbersome.

Relates to Key Learning Point #1: Describe the characteristics of *T. pallidum*, the causative agent of syphilis. Where Question Content is presented: EDG 2010/Passport to Partner Services – Key Disease Concepts Unit 2, Topic 1, page 4 of 5

2. Which of the following statements about the ways in which syphilis is transmitted is true?
   A. Not all persons with secondary syphilis will have mucous patches or condylomata lata
   B. Most transmission occurs during primary syphilis
   C. There is an approximately 33% chance that a person will acquire syphilis from someone with primary or secondary syphilis after just one sexual exposure.
   D. All of the above (Correct)

**Incorrect Answer Response:** All three statements are true. *T. pallidum* is transmitted from one person to another by the open sores (chancres) of the first stage (primary syphilis) or by mucous patches or condylomata lata of the second stage (secondary syphilis). While it is believed that all persons with primary syphilis have one or more chancres, not all persons with secondary syphilis will have mucous patches or condylomata lata. About one third of persons who have sex one time with someone with primary or secondary syphilis will acquire syphilis. By far, most transmission occurs during primary syphilis.

Relates to Key Learning Point #2: Discuss the ways in which *T. pallidum* is transmitted during primary, secondary, or congenital syphilis. Where Question Content is presented: EDG 2010/Passport to Partner Services – Key Disease Concepts Unit 2, Topic 1, page 5 of 5.

3. Kassowitz’s Law states the following:
   A. The longer the duration of the mother’s untreated syphilis infection before pregnancy, the less likely it is that the fetus will be stillborn or infected. (Correct)
   B. The longer the duration of the mother’s untreated syphilis infection before pregnancy, the more likely it is that the fetus will be stillborn or infected.
C. Women treated for syphilis during the second half of pregnancy are at risk for premature labor or fetal distress if the treatment produces a Jarisch-Herxheimer reaction.

D. None of the above

Incorrect Answer Response: Kassowitz’ law states that the longer the duration of untreated infection before pregnancy, the less likely the fetus will be infected and stillborn. While, infants born to mothers in early syphilis are usually infected (and many are stillborn), infants born to women with late syphilis may not be infected, particularly after about four years of infection. It is thought that beyond eight years of infection women no longer infect their fetus.

Where Question Content is presented: EDG 2010/Passport to Partner Services – Key Disease Concepts Unit 2, Topic 6, page 2 of 4.

Relates to Key Learning Point #3: Describe the signs and symptoms and degree of infectiousness of the following stages of syphilis: incubating, primary, secondary, latent, early latent, and early and late congenital syphilis.

4. Which of the following statements about latent syphilis is true?

A. All cases of syphilis are latent at some time during the course of untreated infection.
B. A diagnosis of latent syphilis is made on the basis of a confirmed positive serologic test and a negative physical exam.
C. Spirochetes are present during latent syphilis.
D. All of the above (Correct)

Incorrect Answer Response: Latent syphilis is a stage in which neither signs nor symptoms are present to suggest infection, yet spirochetes are present in the body. The diagnosis of latent syphilis is made on the basis of a confirmed positive serologic test and a negative physical exam. All cases of syphilis are latent at some time during the course of an untreated infection. Latent simply means "without symptoms or signs"; spirochetes are present, and silent disease can be occurring.

Where Question Content is presented: EDG 2010/Passport to Partner Services – Key Disease Concepts Unit 2, Topic 4, page 2 of 3.

Relates to Key Learning Point #4: Define latent syphilis and discuss where it can occur in the course of untreated syphilis.

5. Which of the following statements about secondary syphilis is true?

A. Typically there is a latent period of several weeks between the disappearance of the chancre of primary syphilis and the signs and symptoms of secondary syphilis. (Correct)
B. The signs and symptoms of secondary syphilis typically last from 8 to 12 weeks.
C. Approximately two thirds of all untreated or inadequately treated persons will have a recurrence of secondary syphilis
D. All of the above

Incorrect Answer Response:
• Usually there is a latent period of several weeks between the disappearance of the chancre (primary syphilis) and the onset of signs symptoms and symptoms of secondary syphilis.
• The symptoms and signs of secondary syphilis last 2 to 6 (not 8 to 12) weeks before the body's immune system kills most of the spirochetes.
• About one quarter (not 2/3) of untreated, or inadequately treated, persons have a recurrence of secondary syphilis, with spirochetes again entering the blood stream from sites still infected after the first episode. Most relapses appear before the end of the first year of infection and are rare after two years of infection. In all patients, whether there is a recurrence or not, spirochetes continue to live in the body.

Relates to Key Learning Point #5: State the minimum, maximum, and average durations of untreated primary, secondary, and early latent syphilis. Where Question Content is presented: EDG 2010/Passport to Partner Services – Key Disease Concepts Unit 2, Topic 3, page 7 of 8.

6. Three important points to remember about a primary lesion are:
   A. The lesion appears at the site of inoculation, it is highly infectious, and it is very painful.
   B. It appears at the site of inoculation, it is highly infectious, and it is malodorous.
   C. It appears at the site of inoculation, it is highly infectious, and it resolves without treatment. (Correct)
   D. All of the above

Incorrect Answer Response: The longer the chancre has been present, the greater the likelihood the serologic tests will be reactive. Most people with primary syphilis wait a week before seeking medical attention, and about three out of four individuals with primary syphilis have a positive serologic test when first seen. If the lesion has been present a month, nearly all serologic tests will be reactive. The four most important epidemiologic points to remember about a primary lesion are: The lesion appears at the site of inoculation, it is highly infectious, it resolves without treatment, and serologic tests may not be reactive until a week after the lesion develops.

Relates to Key Learning Point #6: List three important epidemiologic facts about the primary syphilis lesion. Where Question Content is presented: EDG 2010/Passport to Partner Services – Key Disease Concepts Unit 2, Topic 3, page 4 of 8.

7. The two most infectious clinical manifestations of secondary syphilis are:
   A. Alopecia and mucous patches
   B. Condylomata lata and mucous patches (Correct)
   C. Macular rash and condylomata lata
   D. Alopecia and macular rash

Incorrect Answer Response: Two characteristic skin lesions of secondary syphilis are infectious. The first are moist papules, which are called condylomata lata. They occur in the anogenital region, and their appearance can be confused with "fleshy" warts. These lesions teem with spirochetes, and, thus, are highly infectious. The second type of skin lesions are shallow erosions of the mouth, throat, or cervix; these are called mucous patches.
Relates to Key Learning Point #7: State the two most infectious clinical signs of secondary syphilis. Where Question Content is presented: EDG 2010/Passport to Partner Services – Key Disease Concepts Unit 2, Topic 3, page 7 of 8.

8. Diagnostic tests for syphilis include:
   A.  Treponemal
   B.  Nontreponemal
   C.  Darkfield microscopy
   D. All of the above (Correct)

Incorrect Answer Response: The most accurate way to diagnose syphilis is to see the organism under the microscope. This test involves darkfield microscopy. There are two types of serologic tests for syphilis: nontreponemal and treponemal. Nontreponemal tests are based on detecting reaginic antibody and treponemal tests detect antibody directed specifically against *T. pallidum.*

Relates to Key Learning Point #8: Describe the diagnostic tests for primary, secondary, congenital, and neurosyphilis. Where Question Content is presented: EDG 2010/Passport to Partner Services – Key Disease Concepts Unit 2, Topic 2, page 2 of 4.

9. Treatment consisting of 3 (2.4 mu each) doses of intramuscular benzathine penicillin G one week apart is recommended for which type of syphilis?
   A. Primary, secondary, or early latent syphilis occurring less than 1 year after infection
   B. Neurosyphilis
   C. Late latent syphilis occurring more than 1 year after infection (Correct)
   D. Congenital syphilis

Incorrect Answer Response: Therapy for late latent syphilis of more than one year's duration since infection and for latent syphilis of unknown duration is 7.2 million units of intramuscular benzathine penicillin G administered as three doses of 2.4 million units each at one week intervals. Research is continuing to develop alternatives to benzathine penicillin, particularly those that are oral, to avoid the need for painful, intramuscular injections.

Relates to Key Learning Point #9: List the recommended therapies for early syphilis (less than one year duration) and for late latent syphilis. Where Question Content is presented: EDG 2010/Passport to Partner Services – Key Disease Concepts Unit 3, Topic 7, page 2 of 3.

10. Jarish-Herxheimer reaction refers to:
    A. The progressive degeneration of the spinal cord that occurs in the late (tertiary) stage of syphilis
    B. A syphilitic alteration of the brain that leads to dementia and paralysis
    C. A short-term immunologic reaction commonly seen following antibiotic treatment of syphilis (Correct)
    D. None of the above

Incorrect Answer Response: Jarisch-Herxheimer reaction is a short-term immunologic reaction commonly seen following antibiotic treatment of syphilis. It is manifested by sudden fever,
chills, headache, muscle pain, and inflammation of syphilis lesions; most often observed in secondary syphilis. The reaction rarely lasts longer than 24 hours. Women treated for syphilis during the second half of pregnancy are at risk for premature labor or fetal distress if the treatment produces a Jarisch-Herxheimer reaction. **Relates to Key Learning Point #10:** Define the following terms: Jarisch-Herxheimer reaction and Kassowitz’ Law. **Where Question Content is presented:** Unable to locate reference in EDG 2010/Passport to Partner Services – Key Disease Concepts Unit 2. Topic 6; page 3 of 4