Infectious Disease and Human Anatomy

End of Module Quiz (8 Questions)

1. Which of the following statements about infectious disease transmission is true?
   A. Coughing is an example of transmission through fomites
   B. Organisms that cause STD’s are considered to have both human and animal sources
   C. Transmission refers to the way microorganisms infect a person’s body (Correct)
   D. There is only one way to classify infectious disease transmission

Incorrect Answer Response: The correct statement is that transmission refers to the way microorganisms infect a person's body. There are several ways to classify transmission. One way is by source: for example, animals or people. The organisms that cause STDs are considered to have human sources only. Transmission also can be classified by mode: examples of modes of transmission include coughing, sexual contact, or ingesting contaminated food or water. Coughing and sexual transmission are examples of direct person-to-person transmission. Food and water are examples of transmission through fomites.

Relates to Key Learning Point #1: Describe two modes of infectious disease transmission and give one example of each. Where Question Content is presented: EDG 2010/Passport to Partner Services – Key Disease Concepts Unit 1, Topic 3, page 3 of 9

2. Which of the following statements about infection is true?
   A. Infection may or may not result in disease
   B. In subclinical infection, symptoms of disease do not appear
   C. Infection means a microorganism has been able to multiply on or within the body
   D. All of the above (Correct)

Incorrect Answer Response: All of the response options were true. When an individual comes into contact with a microorganism, he or she may become infected with the organism. This means the microorganism has been able to multiply on a body surface or within the body. This infection may or may not result in disease; that is, damage to the body. This distinction is important because many of the microorganisms that are sexually transmitted may result in infection but not disease.

Where Question Content is presented: EDG 2010/Passport to Partner Services – Key Disease Concepts Unit 1, Topic 1, page 2 of 3

Relates to Key Learning Point #2: Distinguish between infection and disease.

3. Which of the following is an example of a portal of entry for infectious diseases?
   A. Urogenital tract (Correct)
   B. Nervous system
   C. Urine
   D. All of the above
Incorrect Answer Response: Organisms typically enter the body through the respiratory tract, digestive tract, urogenital tract, or through the skin. Some organisms find it easiest to enter the body through the soft moist skin of mucus membranes (e.g., mouth, genitals, or under eyelids).

Relates to Key Learning Point #3: List the portals by which microorganisms may enter the body.

Where Question Content is presented: EDG 2010/Passport to Partner Services – Key Disease Concepts Unit 1, Topic 3, page 4 of 9

4. Which of the following is an example of a portal of exit for infectious diseases?
   A. Urogenital tract
   B. Nervous system
   C. Urine (Correct)
   D. All of the above

Incorrect Answer Response: Organisms can leave the body during respiration, urination, defecation, coughing, and shed from infected skin. Additionally, body fluids such as blood, pus, saliva, mucous, and vaginal and seminal fluids can carry disease organisms that can be transmitted during intimate contact (e.g., sex). Note that different organisms may use different portals.

Relates to Key Learning Point #4: List the portals by which microorganisms may leave the body.

Where Question Content is presented: EDG 2010/Passport to Partner Services – Key Disease Concepts Unit 1, Topic 3, page 4 of 9

5. Which of the following microorganisms are not believed to be sexually transmitted?
   A. Protozoa
   B. Fungi (Correct)
   C. Virus
   D. Bacteria

Incorrect Answer Response: There are four major groups of microorganisms that can cause sexually transmitted infections: Bacteria, Virus, Metazoa (parasites), Protozoa. Other categories of microorganisms include fungi and prions, though these are not believed to be sexually transmitted.

Relates to Key Learning Point #5: List the four major groups of organisms that cause STDs, and give an example of each. Where Question Content is presented: EDG 2010/Passport to Partner Services – Key Disease Concepts Unit 1, Topic 2, page 7 of 8

6. Which of the following statements regarding the immune system is true?
   A. Cell-mediated immunity involves engulfing and digesting foreign material
   B. Cell-mediated immunity does not work properly in a person with AIDS (Correct)
   C. The phagocytic system is very specific and is effective against specific types of viruses
   D. It generally takes the body 3 to 5 days to produce antibodies against a foreign pathogen

Incorrect Answer Response:
- Cell-mediated immunity works by communicating with other parts of the immune system or the body. HIV causes AIDS (Acquired Immunodeficiency Syndrome) by infecting and destroying T-helper cells (CD4 cells) so that cell-mediated immunity cannot work and cannot activate the rest of the immune system.
- The first component of the immune system, the phagocytic system, is constantly operating, and it is the first line of immune defense, operating within minutes of invasion by a wide variety of microorganisms. Phagocytes (PMNs) are immune cells that engulf and ingest any foreign material that they happen to encounter.
- Antibodies don’t appear overnight; it takes time for the host B cells that manufacture them, in general, 10-14 (not 3 to 5) days.

Relates to Key Learning Point #6: Describe the immune system.
Where Question Content is presented: EDG 2010/Passport to Partner Services – Key Disease Concepts Unit 1, Topic 4, page 3 of 6

7. The male anatomy consists of the following?
   A. Corpus spongiosum, corpus cavernosum
   B. Skene’s Glands, Bartholin’s Glands
   C. Cowper’s Glands, Epididymis, Vas Deferens
   D. Both A and C (Correct)

Incorrect Answer Response: Skene's and Bartholin's glands are found only in women—all of the other options are part of the male anatomy.

- Inside the penis, the corpus spongiosum (spongy body) protects the tube of the urethra, while the corpus cavernosum (erectile body) is the structure that may fill with blood to produce an erection.
- Each of the two scrotal sacs, or scrotum, contains one of the testes and epididymis. During ejaculation, millions of mature sperm are transported through the vas deferens from the epididymis, mixing with secretions from the seminal vesicles called semen.
- These secretions account for about 60% of the volume of the ejaculate, while the prostate gland and Cowper’s glands provide about 30% of the fluid, and the sperm themselves make up only 10% of the ejaculate fluid. Cowper’s glands also provide the thin fluid that might be noticed at the meatus during the excitatory, pre-ejaculation stage of intercourse.

Relates to Key Learning Point #7: Identify the structures of the male reproductive and genitourinary tract. Where Question Content is presented: EDG 2010/Passport to Partner Services – Key Disease Concepts Unit 1, Topic 5, page 2 of 4C

8. Which of the following statements about the female reproductive and genitourinary tract is true?
   A. Younger women are more susceptible to Chlamydia bacteria than older women
   B. The cervix is shaped like a small donut, with a hole in the center called an os.
   C. The cervix of younger women is lined with more of the tissue, columnar epithelium, that the Chlamydia bacteria targets
   D. All of the above (Correct)

Incorrect Answer Response: Each of the statements is true.
• Adolescents generally have a greater quantity of vulnerable columnar epithelium exposed to the vagina. This is a major reason why young women are so susceptible to chlamydial infections; there is simply a very big target of columnar epithelial cells for chlamydia bacteria to infect.

• The cervix is shaped like a small donut, with a hole in the center called an os. The cervical os stays closed for most of a woman’s life and usually opens only during the delivery of a baby from the uterus into the vaginal canal.

Relates to Key Learning Point #8: Identify the structures of the female reproductive and genitourinary tract.
Where Question Content is presented: EDG 2010/Passport to Partner Services – Key Disease Concepts Unit 1, Topic 5, page 3 of 4