Porth's Pathophysiology-concepts-of-altered-health-states-10e-norris

- 1. At an international nursing conference, many discussions and breakout sessions focused on the World Health Organization (WHO) views on health. Of the following comments made by nurses during a discussion session, which statements would be considered a good representation of the WHO definition? Select all that apply.
 - A) Interests in keeping the elderly population engaged in such activities as book reviews and word games during social time
 - B) Increase in the number of chair aerobics classes provided in the skilled care facilities
 - C) Interventions geared toward keeping the elderly population diagnosed with diabetes mellitus under tight blood glucose control by providing in-home cooking classes
 - D) Providing transportation for renal dialysis patients to and from their hemodialysis sessions
 - E) Providing handwashing teaching sessions to a group of young children Ans: A, B, C, E

Feedback:

The WHO definition of health is defined as "a state of complete physical, mental, and social well-being and not merely the absence of disease and infirmity." Engaging in book reviews facilitates mental and social well-being; chair aerobics helps facilitate physical well-being; and assisting with tight control of diabetes helps with facilitating physical well-being even though the person has a chronic disease. Handwashing is vital in the prevention of disease and spread of germs.

- 2. A community health nurse is teaching a group of recent graduates about the large variety of factors that influence an individual's health or lack thereof. The nurse is referring to the *Healthy People 2020* report from the U.S. Department of Health and Human Services as a teaching example. Of the following aspects discussed, which would be considered a determinant of health that is outside the focus of this report?
 - A) The client has a diverse background by being of Asian and Native American descent and practices various alternative therapies to minimize effects of stress.
 - B) The client has a family history of cardiovascular disease related to hypercholesterolemia and remains noncompliant with the treatment regime.
 - C) The client has a good career with exceptional preventative health care benefits.
 - D) The client lives in an affluent, clean, suburban community with access to many health care facilities.

Ans: B

Feedback:

In *Healthy People 2020*, the focus is to promote good health to all (such as using alternative therapies to minimize effects of stress); achieving health equity and promoting health for all (which includes having good health care benefits); and promoting good health (which includes living in a clean community with good access to health care). A client's noncompliance with treatments to control high cholesterol levels within the presence of a family history of CV disease does not meet the "attaining lives free of preventable disease and premature death" determinant.

- 3. A physician is providing care for a number of patients on a medical unit of a large, university hospital. The physician is discussing with a colleague the differentiation between diseases that are caused by abnormal molecules and diseases that cause disease. Which of the following patients most clearly demonstrates the consequences of molecules that cause disease?
 - A) A 31-year-old woman with sickle cell anemia who is receiving a transfusion of packed red blood cells
 - B) A 91-year-old woman who has experienced an ischemic stroke resulting from familial hypercholesterolemia
 - C) A 19-year-old man with exacerbation of his cystic fibrosis requiring oxygen therapy and chest physiotherapy
 - D) A 30-year-old homeless man who has *Pneumocystis carinii* pneumonia (PCP) and is HIV positive.

Ans: D

Feedback:

PCP is an example of the effect of a molecule that directly contributes to disease. Sickle cell anemia, familial hypercholesterolemia, and cystic fibrosis are all examples of the effects of abnormal molecules.

- 4. A member of the health care team is researching the etiology and pathogenesis of a number of clients who are under his care in a hospital context. Which of the following aspects of clients' situations best characterizes pathogenesis rather than etiology?
 - A) A client who has been exposed to the *Mycobacterium tuberculosis* bacterium
 - B) A client who has increasing serum ammonia levels due to liver cirrhosis
 - C) A client who was admitted with the effects of methyl alcohol poisoning
 - D) A client with multiple skeletal injuries secondary to a motor vehicle accident Ans: B

Feedback:

Pathogenesis refers to the progressive and evolutionary course of disease, such as the increasing ammonia levels that accompany liver disease. Bacteria, poisons, and traumatic injuries are examples of etiologic factors.

- 5. A new myocardial infarction patient requiring angioplasty and stent placement has arrived to his first cardiac rehabilitation appointment. In this first session, a review of the pathogenesis of coronary artery disease is addressed. Which statement by the patient verifies to the nurse that he has understood the nurse's teachings about coronary artery disease?
 - A) "All I have to do is stop smoking, and then I won't have any more heart attacks."
 - B) "My artery was clogged by fat, so I will need to stop eating fatty foods like French fries every day."
 - C) "Sounds like this began because of inflammation inside my artery that made it easy to form fatty streaks, which lead to my clogged artery."
 - D) "If I do not exercise regularly to get my heart rate up, blood pools in the veins causing a clot that stops blood flow to the muscle, and I will have a heart attack."

Ans: C

Feedback:

The true etiology/cause of coronary artery disease (CAD) is unknown; however, the pathogenesis of the disorder relates to the progression of the inflammatory process from a fatty streak to the occlusive vessel lesion seen in people with coronary artery disease. Risk factors for CAD revolve around cigarette smoking, diet high in fat, and lack of exercise.

- 6. A 77-year-old man is a hospital inpatient admitted for exacerbation of his chronic obstructive pulmonary disease (COPD), and a respiratory therapist (RT) is assessing the client for the first time. Which of the following aspects of the patient's current state of health would be best characterized as a symptom rather than a sign?
 - A) The patient's oxygen saturation is 83% by pulse oxymetry.
 - B) The patient notes that he has increased work of breathing when lying supine.
 - C) The RT hears diminished breath sounds to the patient's lower lung fields bilaterally.
 - D) The patient's respiratory rate is 31 breaths/minute.

Ans: B

Feedback:

Symptoms are subjective complaints by the person experiencing the health problem, such as complaints of breathing difficulty. Oxygen levels, listening to breath sounds, and respiratory rate are all objective, observable signs of disease.

- 7. Which of the following situations would be classified as a complication of a disease or outcome from the treatment regimen? Select all that apply.
 - A) Massive pulmonary emboli following diagnosis of new-onset atrial fibrillation
 - B) Burning, intense incision pain following surgery to remove a portion of colon due to intestinal aganglionosis
 - C) Development of pulmonary fibrosis following treatment with bleomycin, an antibiotic chemotherapy agent used in treatment of lymphoma
 - D) Gradual deterioration in ability to walk unassisted for a patient diagnosed with Parkinson disease
 - E) Loss of short-term memory in a patient diagnosed with Alzheimer disease Ans: A, C

Feedback:

Development of pulmonary emboli and pulmonary fibrosis following chemotherapy are both examples of a complication (adverse extensions of a disease or outcome from treatment). It is normal to expect incisional pain following surgery. As Parkinson disease progresses, the inability to walk independently is expected. This is a normal progression for people diagnosed with Parkinson's. Loss of short-term memory in a patient diagnosed with Alzheimer disease is an expected finding.

- 8. Laboratory testing is ordered for a male patient during a clinic visit for a routine follow-up assessment of hypertension. When interpreting lab values, the nurse knows that
 - A) a normal value represents the test test that fall within the bell curve.
 - B) if the lab result is above the 50% distribution, the result is considered elevated.
 - C) all lab values are adjusted for gender and weight.
 - D) if the result of a very sensitive test is negative, that does not mean the person is disease free.

Ans: A

Feedback:

What is termed a normal value for a laboratory test is established statistically from results obtained from a selected sample of people. A normal value represents the test results that fall within the bell curve or the 95% distribution. Some lab values (like hemoglobin) are adjusted for gender, other comorbidities, or age. If the result of a very sensitive test is negative, it tells us the person does not have the disease, and the disease has been ruled out or excluded.

- 9. The laboratory technologists are discussing a new blood test that helps establish a differential diagnosis between shortness of breath with a cardiac etiology and shortness of breath with a respiratory/pulmonary etiology. A positive result is purported to indicate a cardiac etiology. The marketers of the test report that 99.8% of patients who have confirmed cardiac etiologies test positive in the test. However, 1.3% of patients who do not have cardiac etiologies for their shortness of breath also test positive. Which of the following statements best characterizes this blood test?
 - A) Low validity; high reliability
 - B) High sensitivity; low specificity
 - C) High specificity; low reliability
 - D) High sensitivity; low reliability

Ans: B

Feedback:

A large number of patients would receive the correct positive diagnosis (high sensitivity), while a significant number would receive a false-positive diagnosis (low specificity). The information given does not indicate low reliability or low validity.

- 10. As part of a screening program for prostate cancer, men at a senior citizens' center are having their blood levels of prostate-specific antigen (PSA) measured. Which of the following statements would best characterize a high positive predictive value but a low negative predictive value for this screening test?
 - A) All of the men who had high PSA levels developed prostate cancer; several men who had low PSA levels developed prostate cancer.
 - B) All of the men who had low PSA levels were cancer-free; several men who had high levels also remained free of prostate cancer.
 - C) Men who had low PSA levels also displayed false-positive results for prostate cancer; men with high levels were often falsely diagnosed with prostate cancer.
 - D) The test displayed low sensitivity but high specificity.

Ans: A

Feedback:

The test's inability to rule out cancer with a low PSA level indicates a low negative predictive value. Answer B suggests a high negative predictive value, while answer C indicates a low positive predictive value. High positive predictive value is associated with high sensitivity.