Quiz - *Disease Detectives*

1. The meninges are
   A. protective membranes that surround the brain and spinal cord.
   B. parts of the brain that regulate breathing rate and heartbeat rate.
   C. the nerve pathways in the spinal cord responsible for voluntary movement.
   D. the nerve pathways in the brain responsible for conscious sensation.

2. Which type of pathogen causes a highly contagious and potentially deadly form of meningitis?
   A. Viruses
   B. Fungi
   C. Bacteria
   D. Protozoa

3. The best way to protect a person from getting bacterial meningitis is through
   A. becoming immune by being exposed to someone with meningitis.
   B. avoiding contact with people who have meningitis.
   C. getting a vaccination.
   D. taking antibiotics.

4. Which symptoms best indicate that a person might have meningitis?
   A. Fever, fatigue, and cough
   B. Stiff neck, fever, headache
   C. Body aches, nausea, and vomiting
   D. Seizures, vision loss, and paralysis

5. To diagnose meningitis a doctor will
   A. use gel electrophoresis to determine if a person has the gene for meningitis.
   B. test the patient's blood for the human immunodeficiency virus (HIV)
   C. collect and test a patient's cerebrospinal fluid.
   D. use a microscope to determine if there are antibodies in the patient's blood.

6. Cerebrospinal fluid is fluid that
   A. is used to treat meningitis.
   B. surrounds the brain and spinal cord.
   C. is present only if there is damage to the brain or spinal cord.
   D. Is injected into the brain during a lumbar puncture.

7. Bacterial meningitis may be deadly because the pathogens release
   A. toxins that damage brain blood vessels and cause brain swelling.
   B. white blood cells that engulf and destroy nerve cells.
   C. cerebrospinal fluid that poisons the meninges.
   D. viruses that cannot be treated with antibiotics.

8. A flu vaccine is <u>not</u> effective in preventing meningitis because
   A. it only triggers the production of antibodies that fight the flu virus.
   B. it must be given each year.
   C. it is safe for adults but not for children under age 11.
   D. it does not trigger the production of antibiotics.

9. Brain edema (swelling) can result in
   A. increased intelligence.
   B. increased risk for seizures and coma.
   C. decreased white blood cells in the brain.
   D. decreased enzymes in the brain.

10. The chart below shows the results of testing for four diseases and a test of a patient's cerebrospinal fluid.

CSF Test Results

	Glucose	Protein	Most Common White Blood Cells
Patient	normal	normal or high	lymphocytes
Influenza	normal	normal	neutrophils
West Nile Disease	normal	normal	lymphocytes
Bacterial meningitis	low	high	neutrophils
Viral meningitis	normal	normal or high	lymphocytes

According to the test results, the patient most likely has
   A. influenza.
   B. bacterial meningitis.
   C. West Nile Disease.
   D. viral meningitis.