### Mad Cow Disease

## $B_{\text{ovine spongiform encephalopathy (BSE) is the technical term for}$

what is more commonly known as "Mad Cow Disease." BSE is a progressive, fatal neurological disorder that occurs in cattle. The highly contagious disease is caused by a form of protein, called a prion, which attacks brain tissue by forming sponge-like holes. The cow then begins to behave strangely and dies relatively quickly. Scientists are not positive as to the exact origin of BSE. The disease may have been caused by infected feed, which was fed to cattle. Evidence suggests that sheep meat and bone meal infected with scrapie, as disease similar to BSE, was used as feed. It is also possible that BSE was spread by feeding cow meat and bone meal to young calves. BSE was first found in 1986 in the United Kingdom (UK). During an epidemic outbreak in January of 1993, approximately 1,000 cases of BSE per week were reported in the UK alone.

While BSE affects cattle, it may be transmitted to humans as a form of Creutzfeldt-Jakob disease, in which prions attack the human brain in the same manner that they attack the bovine brain. After consuming **contaminated** beef, humans may contract the disease (vCJD). One hundred seventy-seven cases of vCJD have been reported worldwide as of December 2005. This is a relatively small number of cases, especially considering that the average occurrence rate is one case per million people, per year.

The U.S. Department of Agriculture (USDA) announced a case of BSE in 2003 involving a cow in Washington State. By tracing the animal, it was found to have been imported from Canada in 2001. Because the beef entered the food supply, however massive recalls were issued. Since discovering the outbreaks of vCJD, the U.S. Center for Disease Control (CDC) has monitored the disease and declared the risk of contamination is "extremely low." The USDA surveys high-risk cattle before they go to slaughter. Other measures by federal and international agencies are being taken to ensure that the meat supply remains safe for human consumption and that products made from cattle are safe for use.

# Questions

- 1. Which of the following best states the author's purpose?
  - A. to try to convert more readers to vegetarianism
  - **B.** to explain how BSE and vCJD are similar
  - C. to describe how BSE affects cattle and humans
  - **D.** to inform the reader about the disease and what is being done to keep them safe.
- 2. Which of the following accurately defines the risk of contracting vCJD?
  - **A.** The risk is very low, if government monitoring has not eliminated it altogether.
  - **B.** People are at risk only if they eat beef that had been fed sheep meat and bone meal.
  - **C.** The disease has reached epidemic levels and poses a serious health threat to the general public.
  - D. There have been no reported cases of vCJD in the last ten years.

#### 3. Which of the following best states the reason for paragraph 1?

- A. It describes how dangerous it is to consume beef in foreign countries.
- B. It explains the cause and spread of BSE.
- **C.** It informs the reader about the type of feed that is fed to animals.
- D. It describes the dangers of eating meat.
- 4. As used in the passage, the word *contaminated* most nearly means **A**. filled
  - **B.** affected
  - C. ill
  - **D**. infected
- 5. According to the passage, which of the following statements is true?
  - $\label{eq:A. It is not possible for humans to be affected by BSE$
  - **B.** Cases of vCJD were first reported in the U.S.
  - C. The CDC monitors high-risk cattle.
  - **D.** Federal agencies are taking BSE ad vCJD seriously.

#### 6. According to the passage, how was BSE spread?

- A. Scientists don't know how BSE is spread.
- **B.** BSE is likely spread by feeding diseased sheep and cattle to cows.
- C. BSE is likely spread by combining cattle from international herds.
- D. BSE is spread genetically from cows to calves.

#### Answers:

- 1. D 2. A 3. B

- 4. D
- 5. D
- 6. B