

## BSE: QUESTIONS AND ANSWERS

### How safe is U.S. beef?

The U.S. beef supply is extremely safe. While four cases of BSE have been detected in the United States, the U.S. government moved rapidly to respond appropriately. Eating beef has never been associated with human illness. Therefore, beef cuts such as steaks, roasts and ground beef and any beef used to make further processed products is safe to consume.

Only four older cows, one of Canadian origin, have tested positive for BSE in the U.S. since surveillance testing began in the early 1990's. More than 80 percent of the beef consumed in the U.S. is derived from young cattle less than 30 months of age.

### Why 30 months?

The majority of BSE cases confirmed worldwide have been in animals 30 months or older.

### What causes cattle to develop BSE?

The exact origin of BSE is not yet fully understood, but the disease is spread from feeding infected rendered proteins from ruminants to other ruminants. The Food and Drug Administration banned that practice in 1997. The two cows detected with BSE in the U.S. were born before the feed ban went into effect in 1997. Nearly 100 million head of cattle reside in the U.S.

### Is BSE widespread in American cattle herds?

No. The United States employs a multi firewall strategy that includes import controls on meat and livestock; strict feed controls and biosecurity to prevent the spread of the disease; and careful surveillance of cattle herds for animals exhibiting signs of the disease. Since June 2004, USDA has tested more than 800,000 high-risk cattle as part of an enhanced surveillance program. This level of testing is well beyond international requirements.

A comprehensive risk analysis conducted by Harvard University in 2001 and 2003 concluded that given the preventive and control systems in place in the U.S., "BSE is extremely unlikely to become established in the U.S."

### To be safe, should I limit my consumption of beef?

No. U.S. beef is safe. The BSE agent is found primarily in neurological tissues, such as brains and spinal cords of infected animals. These beef tissues are known as potentially infectious materials or Specific Risk Materials (SRMs) and are removed from the food supply.

### With so many cases of BSE detected in the United Kingdom, why did such a small percentage of people develop Creutzfeldt-Jakob Disease?

The exact level of exposure to the BSE agent needed to cause human illness is unknown. However, scientists believe that it is not easy to contract Creutzfeldt-Jakob Disease (vCJD). In fact, the world's leading experts believe those who have developed vCJD probably have a certain genetic predisposition that is triggered by exposure to the BSE agent. In other words, the infective agent does not transmit easily in humans. In fact, while more than 190,000 cases of BSE have been diagnosed worldwide, about 225 cases of vCJD have been diagnosed – though many people were exposed to the BSE agent.

### Are there beef products that I should avoid to reduce risk?

No changes in beef consumption are necessary, and consumers should continue to enjoy beef and beef products as part of their diet. The U.S. government mandates that all known potentially infectious materials, or SRMs, be removed from the food supply.

### If U.S. beef is safe, why did some of our trading partners halt beef imports?

The temporary cessation of trade with some nations was disappointing, but not entirely unexpected. Any time a case of BSE is detected in a foreign country, countries around the world have historically halted trade. This policy dates back to the early stages of the BSE epidemic in the United Kingdom when little was known about how to contain and prevent BSE. Today, however, the situation is quite different and discussions are under way about harmonizing beef trade among nations that implement BSE prevention and control strategies.

Under international health standards set by the Office of International Epizootics (OIE), no nation should be prevented from exporting its beef due to BSE. However, the OIE does prescribe actions that should be taken based on the degree of risk in a given country. The United States has exceeded these standards many times over.

### Is BSE contagious? Could it spread to other cattle?

No. BSE is not a contagious disease, unlike the highly contagious foot-and-mouth disease that is caused by a virus. BSE is transmitted from animal to animal through the consumption of contaminated feedstuffs.

**The Food and Drug Administration has banned the addition of ruminant-derived proteins to cattle feed. Why not simply ban all added animal proteins from all livestock feed rations?**

There is no scientific evidence that proteins derived from cattle — even if they were BSE-infected — pose a risk to poultry or pigs. From an animal nutrition standpoint, the additional nutrients found in meat and bone meal, fish meal, etc., assist in balancing an animal's protein/amino acid intake, since plant proteins from corn or soybeans and other plants have some amino acid deficiencies for mammals and birds. These valuable protein sources are used in very small quantities, which resemble brown sugar, in many animal feeds.

In 2009, FDA implemented additional safeguards to prevent any ruminant proteins from becoming part of the ruminant feed chain. Specifically, FDA will prohibit brain and spinal cords from cattle 30 months or older to be processed for any animal food.

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**Which type of BSE has been found most recently in the United States?**

USDA's Animal and Plant Health Inspection Service (APHIS) announced that the April 2012 case detected in a California cow is Atypical BSE. The U.S. has detected four cases of BSE. The first case in 2003 was Classical BSE and occurred in a cow born in Canada and imported into Washington State. The other three cases in 2005, 2006, and 2012 have all been declared Atypical BSE.

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**What is the difference between Classical BSE and Atypical BSE?**

Classical BSE is the original form of BSE first identified in the United Kingdom in the late 1980's. The average age of clinical onset for classical BSE is about five years of age. Atypical BSE cases generally occur at a more advanced age. Classical BSE is known to be spread through contaminated feed. Atypical BSE is not thought to be spread through contaminated feed.

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**Given four cases of BSE in the U.S., how can we be confident that the feed ban has been effective?**

There is no evidence that the feed ban has been anything less than 100 percent effective. The 2003 case of Classical BSE was traced to an imported cow. The three subsequent cases have been found to be Atypical BSE, which is not thought to be caused by contaminated feed.

In 2008 another preventative measure was enacted to strengthen the 1997 feed ban, which was to ban the brain and spinal cords (tissues that are the highest risk for carrying the agent that causes BSE) in animal feed. The 2008 rule also prohibits the use of the entire cattle carcass not inspected and passed for human consumption, unless the cattle are less than 30 months of age or the brains and spinal cords have been removed.