

Bovine spongiform encephalopathy (BSE): Atypical and Classical

BSE is an always fatal, progressive disease of cattle. It belongs to a group of diseases that affect the nervous system of humans and other animals called transmissible spongiform encephalopathies. BSE is associated with the presence of an abnormal form of a protein called prion protein. There is no treatment or vaccine currently available for the disease.

There are two different forms of BSE:

Atypical BSE (H type and L type)

Develops spontaneously in any cattle population.

Transmission to humans has never been reported.

The two types of atypical BSE (H and L) were identified in 2004. It is a very rare disease, and is expected to occur in all cattle populations, regardless of the control measures in place.

Has worldwide distribution, even in countries where no classical BSE has been reported.

Its occurrence is not considered for the purpose of the official BSE risk status recognition by the World Organisation for Animal Health (WOAH).

The vast majority of cases worldwide (about 92%) have been detected in animals 8 years or older. The youngest case reported to date was 67 months old.

3 cases in Canada (2 H-type and 1 L-type); the last case was reported in 2021.

Classical BSE

Occurs through an animal's consumption of prion contaminated feed.

Can cause variant Creutzfeldt-Jakob disease in humans through the consumption of prion contaminated beef.

Was first diagnosed in cattle in 1986. The implementation of appropriate control measures resulted in its decline worldwide. Today, there are few scattered cases of classical BSE in the world as part of the tail end of the epidemic.

Cases have been reported in more than 20 countries.

Its occurrence may be considered for the purpose of the official BSE risk status recognition by the WOAH.

Cattle get infected during the first year of life and show clinical signs after 5 to 7 years. The youngest case reported to date was 20 months old.

17 cases in Canada; the last case was born in 2009.

Canada is required to notify the WOAH of any occurrence of a confirmed BSE case (either classical or atypical).