

FMD (Foot-Mouth Disease)*

Q: What is foot-and-mouth disease?

A: It is a highly infectious viral disease of animals and also may be called hoof-and-mouth disease. Caused by a virus, it affects cloven-hoofed animals such as cattle, swine, sheep, goats, and deer, often causing epidemics. The disease is characterized by a sudden rise in temperature, followed by an eruption of blisters occurring in the mouth, on areas of tender skin such as the udder in females, and on the feet; blisters may also appear in the nostrils. Salivation and frequent smacking of the lips accompany the eruption. The blisters grow larger and then break, exposing raw, eroded surfaces. Eating becomes difficult and painful, and because the soft tissues under the hoof are inflamed, the animal invariably becomes lame and may shed its hooves. Livestock raised for meat lose much weight, and dairy cattle and goats give less milk. Often the disease kills very young animals and causes pregnant females to abort.

Q: How do you spot it?

A: An animal usually suffers fever and develops blisters, mainly in its mouth or on its feet. The most obvious symptoms are going off feed, severe slobbering, rapid weight loss and lameness. Symptoms can also include shivering, reduced milk yield, sore teats, stiff-legged gait and increased time lying down. There are seven main types of the disease, which have similar symptoms. The average incubation period is between three and eight days but it can be shorter or may be up to two weeks or even longer. The virus responsible for the present outbreak in the UK has been identified as the highly virulent pan-Asiatic O type. When animals recover from infection by one type of the virus they are left with little protection against any of the others.

Q: How does foot-and-mouth disease spread?

A: The disease spreads by infected animals, contaminated people or even vehicles or other contaminated inanimate objects. Meat from animals, which were infected when slaughtered, can also transmit the virus to animals and previous outbreaks have been linked to imports of infected meat. Infected animals, particularly pigs, also excrete the virus several days before symptoms develop so virus particles can be dispersed by the wind. There is documentation that the virus has traveled airborne as far as 156 miles.

Q: Can people get the disease from animals?

A: It is not believed to readily affect humans. There was one recorded case in Britain in 1966. The effects of the disease for that person were similar to flu with some blisters. The British Food Standards Agency says the disease has no implications for the human food chain. People, however, can spread the virus to animals because it can harbor in human nasal passages for as long as 28 hours and has been known to persist on contaminated clothing for 10-12 weeks.

Q: Which animals are susceptible to foot-and-mouth disease?

A: Pigs, cattle, sheep and goats on farms, some wild animals including hedgehogs, rats and deer and some zoo animals, including elephants, giraffes and antelopes. Horses are not affected.

Q: How do you get rid of foot-and-mouth disease?

A: The virus can be killed off by heat, low humidity, or some disinfectants. It is only rarely fatal although it is more likely to kill very young animals. There is no cure for it and it usually runs its course in two or three weeks with most animals recovering, although some animals take up to six months to fully recover.

Q: If most animals don't die why go to such great lengths to eradicate it?

A: The disease is highly contagious with nearly 100 percent of exposed animals becoming infected. If the disease became widespread in any country there would be disastrous economic consequences. For example, the most serious effects of the disease in dairy cattle are loss of milk yield, abortion, sterility, chronic mastitis and chronic lameness.

Q: Which other countries have suffered outbreaks of foot-and-mouth?

A: Among those affected recently are Brazil, Colombia, Egypt, Japan, Kazakhstan, Korea, Kuwait, Malawi, Malaysia, Mongolia, Namibia, Russia, South Africa, Uruguay and Zambia. Foot-and-mouth is endemic in parts of Africa, Asia, the Middle East and South America.

The United States has experienced nine distinct epizootics; the most serious occurred in 1914, invading 22 states and the District of Columbia. The last outbreak, which occurred in California in 1929, was quickly controlled.

Q: How does the U.S. guard against this disease?

A: USDA has a foot-and-mouth disease eradication program. Information about that program can be found at <http://www.aphis.usda.gov/lpa/issues/fmd/fmd.html>

The U.S. Department of Agriculture inspects all imported livestock, stock feed, and bedding at all points of entry. The department is strict in enforcing quarantine regulations. It also is important that persons traveling to countries with foot-and-mouth disease not bring back food products (lunches, etc.) to the U.S.

Considerable progress has been made toward developing an effective vaccine against foot-and-mouth disease, but the cost (approximately \$1 billion annually) of vaccinating all susceptible animals would be prohibitive. In addition, several strains of the virus exist and cross-protection against other strains following vaccination is limited, reducing the usefulness of vaccination. Moreover, the vaccine would not eradicate the disease. Consequently, the slaughter of all exposed animals is the only presently effective countermeasure to foot-and-mouth disease. During the outbreak in the United Kingdom in 1967 and 1968, for example, more than 430,000 animals were slaughtered.

Q: Is foot-and-mouth disease present in Canada or Mexico?

A: To the best of our knowledge, foot-and-mouth disease has not been diagnosed in our neighboring countries for about 50 years.

*This information is provided courtesy of the National Cattlemen's Beef Association.