



# Contagious Equine Metritis

Contagious equine metritis (CEM) is a highly infectious venereal disease of horses. It is caused by the bacteria *Taylorella equigenitalis*. CEM spreads during breeding or through genital contact with contaminated objects. It does not affect other livestock or people. This disease could cause considerable economic losses to the equine industry if it became established in this country. That's why the U.S. Department of Agriculture (USDA) works with State partners to protect our country's horses against CEM. As a horse owner, breeder, or large animal veterinarian, you should learn the signs of this disease and put in place measures to protect your horses or horses under your care.

## History and Distribution of CEM

The first cases of CEM were diagnosed in England in the 1970s. Since then, CEM has been diagnosed in horses in many countries around the world. The United States is currently considered free of CEM. USDA's Animal and Plant Health Inspection Service maintains a list of CEM-affected countries on its website ([www.aphis.usda.gov](http://www.aphis.usda.gov), search "animal health status of regions"). The list includes Japan, South Africa, Korea, all European Union countries, and many other countries in Europe, including Great Britain and Northern Ireland. For more information on CEM reporting around the world, visit the World Animal Health Information System at [wahis.woah.org](http://wahis.woah.org).

## Controlling CEM in the United States

To help keep this disease out of the United States, USDA requires stallions and mares imported from CEM-affected countries to quarantine and test negative for CEM before they can enter the country.



If a case of CEM is detected in this country, animal health officials identify, test, and treat all infected or exposed horses with disinfectant scrubs and antimicrobials to eliminate the bacteria *T. equigenitalis*. While the United States has had sporadic cases of CEM over the years due to the inadvertent importation of infected horses, we have successfully eradicated the disease from our equine population. The most widespread U.S. outbreak of CEM occurred in 2008. It took 2 years to eliminate the disease. After expensive and time-consuming testing of more than 1,000 horses, USDA was able to regain the country's CEM-free status.

## Signs of Infection

Horses infected with CEM can be difficult to identify. Stallions carry the bacteria without showing any signs at all and appear unable to clear infection without treatment. Carrier stallions can silently spread the disease to many other horses at a breeding facility, including other stallions, before CEM infection is suspected or diagnosed. Infection in mares may also be difficult to detect but is usually more noticeable. Mares may exhibit the following signs of infection:

- A thick, milky, mucoid discharge 10 to 14 days after breeding to an infected stallion
- Returning to heat (estrus) prematurely
- Short-term infertility after breeding to an infected stallion and failing to conceive on the first or second estrus after exposure

Unlike stallions, most affected mares will clear the infection without treatment within a few months. However, some mares will remain chronically infected, with or without clinical signs. These mares are capable of infecting other horses even while successfully carrying pregnancies.

## How CEM Spreads

*T. equigenitalis*, the bacteria that causes CEM, spreads in the following ways:

- During live cover breeding
- Through artificial insemination with contaminated semen (chilled or frozen)
- Via contact with contaminated objects, including on hands or sheath cleaning and semen collection equipment

Infected mares able to successfully carry a pregnancy may rarely transmit the disease to their foals.

## Testing for CEM

Private veterinarians should work with State or Federal animal health officials to test horses suspected of having CEM or that were exposed to a CEM-positive animal. CEM testing may also be necessary to meet requirements for exporting horses, semen, or embryos to another country, or as part of a routine breeding soundness examination. There are three types of official tests: bacterial culture, blood test, and test breeding.

Bacterial cultures test for growth of *T. equigenitalis*, the bacteria that cause CEM, in swab samples. Veterinarians collect swabs and send them to a USDA-approved laboratory. ([www.aphis.usda.gov/animal\\_health/lab\\_info\\_services/downloads/ApprovedLabs\\_CEM.pdf](http://www.aphis.usda.gov/animal_health/lab_info_services/downloads/ApprovedLabs_CEM.pdf)). The samples require special handling and must be processed within 48 hours of collection. It takes 7 days to complete the culture process. Typically, veterinarians will collect three sets of swabs for culturing during a 7- to 12-day period.

Blood testing by complement fixation test (CFT) detects an immune response to *T. equigenitalis* infection. It can help to determine if a horse has recently been exposed to the disease. This test can only be used in mares because stallions do not develop an immune response to infection.

Test breeding is required for stallions under certain circumstances in the United States, such as known exposure to *T. equigenitalis* or importation from CEM-affected countries. It is more sensitive than direct sampling and culture of the stallion. To test breed, a stallion is bred to two mares known to be CEM-free. Those mares are then tested for CEM. It takes five weeks and multiple tests on the mares to declare the stallion negative. Test breeding is not normally required to export stallions or semen to another country.

Polymerase chain reaction, or PCR, testing for *T. equigenitalis* is not currently recognized in the United States as an official test for CEM. USDA is currently evaluating this testing method.

## Treatment and Recovery

Infected mares and stallions can be treated using disinfectant scrubs and antimicrobials in a specific 5-day treatment protocol. Fertility appears to return to normal in recovered horses.

## Prevention

You can prevent the spread of CEM by:

- Conducting bacterial culture tests on breeding stallions prior to each breeding season
- Testing any mares that exhibit clinical signs consistent with CEM
- Using proper biosecurity measures, such as cleaning and disinfecting semen collection equipment between stallions
- Keeping records on horse movements and semen shipments so they can be traced if a case of CEM is detected

## Reporting Suspicious Cases

If you suspect an animal may have CEM or any other foreign animal disease, immediately contact your State Animal Health Official ([www.usaha.org/saho](http://www.usaha.org/saho)) or Federal animal health authority ([www.aphis.usda.gov/animal\\_health/contacts/field-operations-districts.pdf](http://www.aphis.usda.gov/animal_health/contacts/field-operations-districts.pdf)).

## Learn More

For more information on CEM, call USDA Veterinary Services at (970) 494-7391 or send an email to [equine.health@usda.gov](mailto:equine.health@usda.gov). You can also visit us online at [www.aphis.usda.gov/aphis/ourfocus/animalhealth](http://www.aphis.usda.gov/aphis/ourfocus/animalhealth).