

# Contagious Equine Metritis

Contagious equine metritis (CEM) is a venereal disease of horses caused by the bacteria *Taylorella equigenitalis*. It is spread during breeding or through contact with contaminated objects. This disease occurs very rarely in the United States and does not affect other livestock or people. However, it is highly contagious among horses and can be difficult to detect and control. Signs of illness in infected mares may not be obvious, and stallions carry the bacteria without showing any signs at all. CEM can have a negative impact on fertility in both mares and stallions. If the disease became widespread in the United States, the horse industry could suffer considerable economic losses.

The U.S. Department of Agriculture (USDA) works actively with its State partners to protect our country's horses against CEM and keep it from becoming established here.

## Background

The first cases of CEM were diagnosed in the 1970s, beginning in England and then in other countries in Europe and in the United States. The disease has been detected sporadically in the United States since that time, most recently in 2013. Animal health officials investigate each detection to identify, test, and treat all infected or exposed horses. Affected horses are treated with antimicrobials to eliminate *T. equigenitalis*; they are then retested and not cleared for release from quarantine until negative results are obtained.

Due to the nature of the disease, it is difficult to determine how widely CEM is distributed throughout the world. USDA currently considers all countries of the European Union, and a small number of others, to be affected with CEM. To protect the U.S. equine industry, horses imported from CEM-affected countries must test negative for the disease before entering the United States.

For the latest information on CEM reporting around the world, visit the World Animal Health Information Database Interface at [www.oie.int/wahis/public.php?page=disease\\_status\\_detail](http://www.oie.int/wahis/public.php?page=disease_status_detail).

## How It Spreads

CEM can be transmitted by an infected horse during breeding; through artificial insemination with contaminated semen; or by contact with contaminated objects, such as hands or instruments. It can also be spread during the semen collection process.

CEM-positive horses that show no signs of illness (called "carriers") can cause outbreaks at breeding facilities. During the breeding season, a carrier stallion may spread the disease to several animals, including other stallions using the same facility, before it is suspected or diagnosed. Infected mares can transmit the disease to their foals, but this happens rarely.

## Signs of Infection

In mares, the infection can appear in three general forms.

- 1) Acute: Active inflammation of the uterus causes an obvious thick, milky, mucus discharge 10 to 14 days after breeding.
- 2) Chronic: Milder uterine inflammation causes less obvious discharge, and infection may be more difficult to eliminate.
- 3) Carrier: The bacteria are established in the reproductive tract. The mare, though not showing signs of illness, is still infectious and can remain a carrier for several months or longer. Infected mares are likely to return to heat (estrus) more quickly than normal.

CEM rarely induces abortion or permanent infertility in mares. Stallions show no signs of the disease, but they can carry the bacteria for years, and it can survive in chilled and frozen semen.

## Testing for CEM

Private veterinarians work with State or Federal animal health officials to test any horse suspected of having CEM, or any horse exposed to a CEM-positive animal. You may also need to test for CEM to meet requirements for exporting horses, semen, or embryos to another country. There are three different ways to test for CEM: bacterial culture, blood testing, and test breeding.

Bacterial culture tests look for the bacteria that cause CEM. Veterinarians collect swabs and send them to approved laboratories. They require special handling

and must be processed within 48 hours of collection. It takes 7 days to get a result. Typically, the veterinarians will collect three sets of swabs for culturing during a 7- to 12-day period.

Blood testing looks for an immune response to CEM, which helps determine if a horse has recently been exposed to the disease. This complement fixation test can only be used in mares because stallions do not develop an immune response to CEM.

Test breeding is used to detect CEM in stallions under certain circumstances. A stallion is bred to two mares known to be CEM-free. Those mares are then tested for CEM. It takes 5 weeks after the test breeding to declare the stallion negative. Test breeding will sometimes detect bacteria that direct testing of the stallion did not detect. To maximize the chances of detecting the bacteria, USDA requires stallions to be tested by both bacterial culture and test breeding if they are known to have been exposed to the CEM bacteria or are being imported to the United States. Test breeding is not normally required to export stallions or semen to another country. Mares are tested with bacterial culturing and blood tests.

### **Treatment and Recovery**

Although the occurrence of CEM in the United States is a serious concern, there is some good news. Both mares and stallions can be successfully treated using disinfectant scrubs and antimicrobials. Most importantly, after treatment, fertility appears to return to normal in recovered horses.

### **Preventing CEM**

Even if you don't suspect that your horses have CEM, you can help prevent its introduction and spread by using proper biosecurity measures in your daily procedures. For example, always clean and disinfect semen collection equipment between stallions. Also, be sure to keep records on horse movements and semen shipments so they can be traced if a case of CEM is detected. For more information on equine biosecurity practices, see USDA's brochure "Biosecurity—The Key To Keeping Your Horses Healthy," available at [www.aphis.usda.gov/publications/animal\\_health/2011/bro\\_keep\\_horses\\_healthy.pdf](http://www.aphis.usda.gov/publications/animal_health/2011/bro_keep_horses_healthy.pdf).

In addition to biosecurity practices, you can also help prevent the spread of CEM by conducting bacterial culture tests on breeding stallions prior to each breeding season. Ideally, you should ask your veterinarian to collect a series of swab sets for CEM testing as part of your stallion's annual breeding soundness exam.

### **Report Suspicious Cases**

If you suspect that an animal may have CEM or any other foreign animal disease, immediately contact State or Federal animal health authorities.

### **Learn More**

For more information on CEM and other animal diseases, visit USDA's Animal and Plant Health Inspection Service (APHIS) Web site at [www.aphis.usda.gov](http://www.aphis.usda.gov). Click on "Animal Health" and then "Animal Disease Information."

Or, contact us at:

Veterinary Services  
USDA/APHIS  
4700 River Road, Unit 41  
Riverdale, MD 20737  
Phone: (301) 851-3595  
Fax: (301) 734-7817

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