

# Questions and Answers: Contagious Equine Metritis

## Q. What is contagious equine metritis?

A. Contagious equine metritis (CEM) is a transmissible, exotic, venereal disease of horses caused by the bacterium *Taylorella equigenitalis*. For more detailed information about CEM, please visit the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service's (APHIS) factsheet, "Contagious Equine Metritis." It is available at [http://www.aphis.usda.gov/publications/animal\\_health/content/printable\\_version/fs\\_ahcem.pdf](http://www.aphis.usda.gov/publications/animal_health/content/printable_version/fs_ahcem.pdf).

## Q. Why is there a concern about CEM?

A. CEM is a serious disease because it is highly contagious. Infected mares can experience temporary infertility for one or more breeding cycles, depending on the severity and location of the infection(s) and other factors. When coupled with the fact that mares can be bred only during certain seasons, CEM can have a devastating effect on equine reproductive efficiency. If CEM were to become established in the United States, the horse industry would suffer great economic losses.

There is no evidence that *T. equigenitalis* affects people.

## Q. What is the current situation with CEM in the United States?

A. Since the first quarter horse was tested positive for *T. equigenitalis* in December 2008, a CEM investigation has been underway, and information about the status of the outbreak is changing frequently. For the most up-to-date information on CEM in the United States, please visit the CEM Hot Issues page at [http://www.aphis.usda.gov/newsroom/hot\\_issues/cem/index.shtml](http://www.aphis.usda.gov/newsroom/hot_issues/cem/index.shtml).

## Q. Do we know how this outbreak started?

A. State animal health officials and APHIS epidemiologists are currently conducting an investigation. At this time, it is too early in the investigation to determine the cause of the outbreak.

## Q. Why do horses suspected of exposure to *Taylorella equigenitalis* need to be tested?

A. Because animals may be asymptomatic, the disease is difficult to detect and control. Stallions exhibit no clinical signs but can carry the *T. equigenitalis* bacteria on their external genitalia for years.

For mares, there are three general degrees of infection:

- Acute: Active inflammation of the uterus causes an obvious thick, milky, mucoid vulvar discharge 10 to 14 days after breeding.
- Chronic: Milder uterine inflammation causes less obvious vulvar discharge, and infection may be more difficult to eliminate.
- Carrier: The bacteria are established in the reproductive tract. The mare, though asymptomatic, is still infectious and can remain a carrier for several months or longer.

## Q. How is CEM spread?

A. CEM is commonly transmitted directly during sexual intercourse between infected breeding mares and stallions. Transmission may also occur indirectly by artificial insemination or contact with other objects, such as hands or instruments, contaminated with the disease bacterium.

Infected carrier mares and stallions are the source of infection for acute outbreaks of the disease. During the breeding season, a carrier stallion may infect several mares before the disease is suspected or diagnosed.

## Q. What is done to prevent the entry of CEM into the United States?

A. CEM is present in some countries that export horses to the United States. The United States has import requirements that require testing and treatment of some horses from those countries. Typically, a stallion or mare will undergo testing and treatment at specially approved U.S. quarantine facilities prior to release for entry into the United States.

## Q. What tests are available to diagnose CEM?

A. There are three different tests or procedures used to determine if a horse is infected. They are: bacterial culture, serum testing, and test breeding.

Bacterial culture is used to test both stallions and mares. Swabs are used to collect samples from the stallion's or mare's genitalia. These swabs are sent to laboratories approved to test for *T. equigenitalis*. The

samples must be shipped in special transport media under controlled temperature. Samples must be placed on the culture media at the lab within 48 hours of when the sample was collected. It takes 7 days to determine if a sample is positive or negative. Usually three sets of swabs for culturing will be collected during a 7-day period.

The serology test used to assist in diagnosing CEM is a complement fixation test. This test is limited to mares that have produced detectable antibodies to *T. equigenitalis*.

A third testing method called test breeding involves breeding a stallion to two pretested negative mares. Adding a third test helps detect the organism in stallions. The test mares are then tested by bacterial culture and serology test to see if they have become infected. It takes 35 days after the test breeding to declare the stallion negative. Test breeding will sometimes detect a *T. equigenitalis* infection that earlier bacterial culturing of the stallion did not detect.

To maximize the chances of detecting CEM infection, stallions are required to be tested by both bacterial culture and test breeding. Mares are tested with the complement fixation serology test and culturing.

**Q. How long does the test process take?**

**A.** On average, the completion of serology (blood test), bacteriology, and breeding tests require a minimum of 6 to 8 weeks to clear the stallion, and approximately 3 weeks to clear the mare.

**Q. Is the government paying for these tests?**

**A.** USDA recognizes the financial difficulty that a disease such as CEM places on the horse industry, and it is providing support to State partners and others to address this situation.

APHIS is taking a collaborative approach in stopping the spread of this disease by providing CEM diagnostic testing at USDA's National Veterinary Services Laboratories (NVSL) in Ames, Iowa; in addition, 15 NVSL-approved CEM laboratories are also being compensated for providing diagnostic testing services.

APHIS is also supporting State epidemiology tracing and diagnostic sample coordination and testing. APHIS is working with States to find the source of the disease and to identify potentially exposed horses. APHIS does not cover the costs of the veterinarian visits to take serum samples and perform bacteriology sampling on a horse.

APHIS will continue working with the States and the horse industry in a manner that is responsive to the needs and input of stakeholders. For example, APHIS officials have modified the diagnostic testing protocol to allow more testing options for bred mares.

**Q. Is CEM treatable?**

**A.** Yes. Both mares and stallions can be successfully treated with topical and systemic antibiotics. The fertility of treated mares is not impaired after recovering from CEM.

**Q. Are there APHIS-recommended protocols for treating CEM and for determining when it is safe for exposed and/or infected horses to be bred again?**

**A.** Yes. APHIS has developed protocols for stallions, mares, and foals. These protocols have been developed with the assistance of State animal health officials, international disease experts, and APHIS epidemiologists. State and Federal animal health officials in disease affected States communicate the protocols to horse owners.

**Q. What is the Federal role in addressing CEM outbreaks?**

**A.** Previously, CEM outbreaks have been detected and eradicated in the United States through the collaborative efforts of State and Federal officials and the equine industry.

In cases where shipments of diseased horses have been divided and shipped to multiple States, APHIS assists with the tracing of potentially infected animals and in identifying the source of the disease.

In response to the current CEM incident, APHIS has worked closely with States and affected owners to help trace animals that may be involved in the investigation to determine when they first entered the United States and where they are presently located. APHIS plans to assist breeders and State veterinarians in eradicating this disease from the United States.

**Q. What about CEM outbreaks in other parts of the world?**

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

**Q. What should horse owners do to protect their animals from CEM?**

**A.** Horse owners should contact their State veterinarian if they suspect one of their horses may have *T. equigenitalis*, or if they have questions or concerns. Using strict biosecurity measures in day-to-day procedures, even when disease is not suspected, is very important in preventing the introduction and spread of CEM and many other infectious diseases. Information on equine biosecurity practices can be found in the APHIS brochure, "Keeping Your Horses Healthy,"

available at [http://www.aphis.usda.gov/lpa/pubs/Horse-BioSecurity\\_final.pdf](http://www.aphis.usda.gov/lpa/pubs/Horse-BioSecurity_final.pdf).

**Q. When can I export semen from a CEM exposed stallion?**

**A.** Semen to be exported must meet the importing country's requirements. All testing related to the CEM exposure must be completed and associated animal quarantines officially lifted before standard export protocols may begin. Time spent in quarantine for CEM does not count toward pre-export isolation periods or quarantines.

**Q. How could having a CEM exposed horse at a semen collection facility or holding center affect export of semen from non-exposed horses?**

**A.** All semen that is collected at a given premises while a CEM exposed horse is on that premises is considered potentially positive until laboratory testing confirms that the exposed horse is negative for CEM and the animal has been officially released from quarantine.

Stallions not exposed to CEM that are cohorts with a potentially exposed stallion undergoing CEM testing may have to wait to begin pre-export requirements for semen export until:

- The exposed stallion completes all testing/treatment and is officially released from quarantine.
- The exposed stallion is removed from premises (before testing is completed).

Note that it may be possible for the exporter to obtain a waiver from the importing country that indicates it will allow semen from a center where an animal is presently quarantined for exposure to CEM.

**Q. Is frozen semen stored at a facility under CEM investigation subject to export restrictions?**

**A.** The product (semen) must meet the importing country requirements. In many cases, semen collected prior to the 2008 breeding season can be exported as long as the donor stallion met all testing requirements at the time of collection. This applies to both exposed animals and any other susceptible animals co-located at the holding center or collection facility. Semen collected from certain exposed and co-located stallions in the 2007 breeding season may also be subject to export restrictions. Please contact State or Federal authorities for case-by-case information.

**Q. Besides the USDA CEM Hot Issues page, are there other means by which local veterinarians are informed of new developments about contagious diseases such as CEM?**

**A.** Resources, such as professional journals like the "Journal of the American Veterinary Medical Association," are available to local veterinarians. Professional societies, including the American Association of Equine Practitioners and State-wide veterinary associations also provide information to local veterinarians.

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