

Coronavirus: Disease in Horses is Different to Humans

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Some in the equine industry may be familiar with coronavirus infections in horses. Amid the current COVID-19 (coronavirus disease 2019) pandemic, you might be wondering if your horse can be affected by this novel (new) coronavirus causing respiratory disease in humans, or can your horse infect you? The short answer is no.

“Coronavirus” is the overarching name for a *family* of viruses. There are many other coronaviruses that cause respiratory disease in humans, including SARS (severe acute respiratory syndrome) and MERS (Middle East respiratory syndrome). Other members of the coronavirus family are known to cause disease in domestic animals including TGE (transmissible gastroenteritis) and PED (porcine epidemic diarrhea) in pigs, FIP (feline infectious peritonitis) in cats, and equine coronavirus infection in horses, all of which cause gastrointestinal disease. These mentioned coronaviruses are not known to be zoonotic, and therefore, humans are not at risk.

Coronavirus infections are highly contagious and in horses, at risk populations include horses in breeding facilities, ranch work/farming environments, the Midwest, and draft breeds. Based on cases seen at the University of Missouri, boarding facilities are also at higher risk where there are large groups of horses. Infections most commonly occur during late fall and winter months.

The most common clinical signs of equine coronavirus infections include a decreased appetite, fever (101.5-106.0°F), and lethargy. Other signs include those associated with mild colic (lying down frequently, flank watching) or changes in fecal consistency (soft or watery). A veterinary examination and diagnostic tests such as routine bloodwork (complete blood count and biochemical profile) often reveal abnormalities consistent with dehydration, decreased white blood cell count, and decreased blood protein status. Rarely, horses will display neurological abnormalities such as a wobbly gait (ataxia) or head pressing.

The virus is shed in feces and is passed from horse to horse via a fecal-oral route. Coronavirus infections in horses are definitely diagnosed by submitting feces for quantitative polymerase chain reaction (qPCR) to identify the implicated viral nucleic acids.

Treatments are highly dependent upon what is discovered during the veterinary examination and initial diagnostic tests. Often, supportive care in the way of anti-inflammatory drugs and gastroprotectants are prescribed. Occasionally, severely affected patients require hospitalization with additional supportive care such as intravenous fluid therapy and plasma transfusions.



Photo courtesy of Dr. Lynn M. Martin



Equine coronavirus infections result in high morbidity and low mortality, meaning many horses may be affected but few will die. Horses generally recover from the infection within three to seven days, but some develop complications and deterioration that warrant euthanasia.

Precautions to employ if you have an affected horse include isolation for no less than 21 days, handling the affected horse last, and keeping tack and barn supplies separate between healthy and affected horses. Affected waste materials should not be disposed of near the healthy horses. All surfaces should have organic debris (feces, soil, wood chips, etc.) removed prior to disinfection with sodium hypochlorite (bleach), povidone iodine, chlorhexidine gluconate, phenols, quaternary ammonium compounds, or peroxygen compounds.

As you have read, coronavirus infection in horses is very different to COVID-19 in humans. At this time, there is no evidence that domestic animals, including horses, dogs and cats, can spread COVID-19 to humans. For this reason, diagnostic testing of animals for COVID-19 is not recommended, and additionally, we need to save diagnostic test supplies for humans. Routine hygiene and health practices should be employed including:

- Washing hands after handling animals, feed, waste or supplies;
- Maintaining clean housing conditions, including routine stall or paddock cleaning with appropriate waste disposal; and
- Having your veterinarian perform an annual physical examination, administer core vaccines (at minimum) and deworm based on fecal egg count results.

Proactively protecting your horse's immune system with the above practices will ensure your equine partner is in peak health and able to better fight infections and perform.

For more information on the equine coronavirus, see these veterinarian-verified resources:

[What Is Equine Coronavirus?](#)

[AAEP and EDCC: Disease Factsheet on Coronavirus](#)



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I am an equine internal medicine specialist at the University of Missouri Veterinary Health Center and serve as the Missouri Horse Council's Vice Chair. During this unprecedented situation, the team at MU is more than happy to address your emergent equine-related questions or concerns. Call 1-573-882-3513 to speak with a receptionist.

An HTML version of this report is also available on the University of Missouri Veterinary Health Center's website. Click [here](#).

