

Equine Protozoal Myeloencephalitis (EPM)

EPM (Equine Protozoal Myeloencephalitis)

By Jessica Lynn –

Equine Protozoal Myeloencephalitis ("EPM") is sometimes called "the master of disguise". This serious disease can be, and is, difficult to diagnose because its signs often mimic other health problems in the horse and signs can range from mild to very severe, muscle weakness, incoordination and many other similar things.

EPM can look like other equine neurologic diseases, including Wobbler syndrome, the neurological form of herpes virus infection, rabies, West Nile virus or other equine viral encephalitis diseases, e.g., Eastern and Western equine encephalitis.

More than 50 percent of all horses in the United States may have been exposed to the organism that causes EPM. The causative organism is a protozoal parasite named *Sarcocystis neurona*. The disease is not transmitted from horse to horse, rather, the protozoa are spread by a definitive host which may include the opossum, raccoon, skunk, armadillo and even scientists are wondering if the domestic cat may also be a carrier. All of these nocturnal animals, are scavenger by nature and may eat anything, including carrion.

The large number of road-killed animals in some areas may contribute to the spread of the disease. The infective stage of the organism, the sporocysts, are passed in the feces of the host animals. The horse comes into contact with the infective sporocysts while grazing in pastures, or eating contaminated feed or drinking water. With the fact that hay is trucked from many states that have a high incident of EPM, long distances, that the hay from those states may also be spreading this dis-order at a higher rate.

Once ingested, the sporocysts migrate from the intestinal tract into the bloodstream and cross the blood/brain barrier. There they begin to attack the horse's central nervous system. The onset of the disease may be slow or sudden. If left undiagnosed and untreated, EPM can cause devastating and lasting neurological damage. Muscle atrophy, including their hind end muscles and facial muscles making it difficult for the horse to chew and swallow.

Research is showing that it can take anywhere from two weeks and up to two years to develop full blown symptoms from the time of exposure. Most horses, at one time or another, probably ingest the sporocysts, and their bodies apparently are able to mount an immune response, and they clear the organisms naturally before they reach the central nervous system. Alternatively, a horse may be persistently infected in the central nervous system, but may be able to somehow combat the organism sufficiently to prevent the development of clinical signs. There appears to be no "dormant" stage for this protozoa.

This disease may be preventable by just some simple house-keeping measures. Anything that may attract opossums, skunks, raccoons, et al in to barns should be tightly covered, or put away, especially at night. This includes cat food, dog food, garbage and grain. Horse feed should not be left out at night for the morning, or even during the day to attract birds. The opossum, skunk and raccoon populations should be kept under control on farms and stables, where possible. However, the problem with this disease spreading is that hay is hauled in from many areas that have a high incident of EPM, and even if you have the most stellar house keeping measures in your barn and feed area, your horse still may be exposed!

Symptoms

Symptoms can include generalized muscle atrophy or loss of condition over the shoulders and hind end, it can also cause atrophy in the facial muscles as well. Secondary signs also occur with neurologic disease, which include locking up of the stifle, which is among the most common findings among horses with EPM, another common symptom of EPM is back soreness, which can be very severe, and soreness all over, where it seems like their hair hurts! EPM causes horses to look uncoordinated, they cannot track their hind legs properly, and it is as though they are likely to "take a bad step" while walking, racing or in training, or are taking normal steps too carefully. Therefore, any horse with these signs should be carefully evaluated for the presence of neurologic disease and/or EPM.

Treatment

There are allopathic medications to treat the symptoms, however, there are no FDA approved drugs for the treatment of this disease, but a number of drugs have been used off-label, or imported from other countries for treating EPM. The most common allopathic treatment is still a combination therapy of pyrimethamine, in combination with sulfadiazine (broad-spectrum anti-microbials), most commonly available from compounding pharmacy's, and anti-protozoal medications (diclazuril, toltrazuril), NSAIDS (non-steroidal anti-inflammatory drugs such as phenylbutazone and flunixin meglumine), corticosteroids, dimethyl-sulfoxide (DMSO). However most of these may have side effects, up to and including causing anemia. The horses on allopathic treatments also need to be supplemented with high doses of Vitamin E, and can be fed herbs high in iron to try to help prevent the anemia.

There are other more natural and holistic approaches available in treating EPM, which I have seen work on many of my friends horses, and my own horse as well. The treatment with Nosodes and homeopathic liquid lasts any where from 48 to 60 days with results being seen in as little as two week. Most horses on either holistic or allopathic treatments back slide, some severley, but that is expected as the protoza are dying off, and during that time is when it occurs.

One old mare, Ms. Colonel Freckles, who was in foal was the worst I have ever seen, she could barely move, and her coordination was so bad that we thought she would just fall over and not be able to get up. We were really concerned that she would pass along the protoza to her un-born foal, and worried about the effect.

We started her out on a paste of concentrated Pro-Zyme, per Dr. Wessener's instruction, while waiting

for the homeopathics to arrive. After a little over two weeks on a homeopathic treatment program as well as high doses of Colostrum and EPM–ZYME there was such a significant difference we could barely believe it!

The Vet we consult with and refer many of our client to, Dr. Gerrald Wessner, www.holisticvetclinic.net, prescribed the homeopathic remedies for the EPM horses and the old mare. Those homeopathic's naturally combat and kill the protoza that causes EPM. The owner of Ms. Colonel Freckles is so pleased, she now expects a healthy colt in the spring 2005, and an even healthier mare as time goes on and will continue to use our products to support her throughout her pregnancy!

Diet

The EPM horse has special needs for nutrition. They should have very little alfalfa, and their diet should be rich in bermuda, orchard grass mix, and timothy hay. They also need help to boost their immune system, and we have recommended additional Colostrum or Beta Blend with Colostrum and Beta Glucan to help those horses, along with generous doses of EPM–Zyme which has anthelmintic herbs and herbs rich in naturally occurring iron. Our other clients have also treated their EPM horses by adding Vitamin E (from 1,000 to 8,000 IU per day) and vitamin C (1,000 – 5,000 mg per day). While others have added Folic Acid to their diets to help counteract the anemia caused by drugs.

When my young horse came down with EPM, it was initially missed by my vet, and she was most likely infected for several months before we really knew what was happening to her. When we discovered it she immediately went on the EPM program of homeopathics, nosodes, and diet changes, along with EPM Zyme, and although she went in to a very bad back slide, due to the protoza dying, she quickly began to regain her health, her strength and her coordination, after only two to three weeks, she was back to her old self and progressing steadily!

Earth Song Ranch designed a natural preventative EPM Herbal formula EPM–Zyme. EPM–Zyme contains our base formula of Pro–Zyme and includes herbs known for boosting the immune system while having naturally occurring anti–parasitic action along with some that have anti–protozoal properties, all work well with homeopathic remedies. We have also included herbs that are used to support the lymphatic system, that have anti–fungal/anti–yeast compounds, and fight chronic inflammation.

If your horses are in an area with an active opossum, raccoon, armadillo, or skunk population EPM–Zyme would be a good natural preventative supplement to feed, with no side affects, and is low in cost.

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