

EPM

# Equine Protozoal Myelitis

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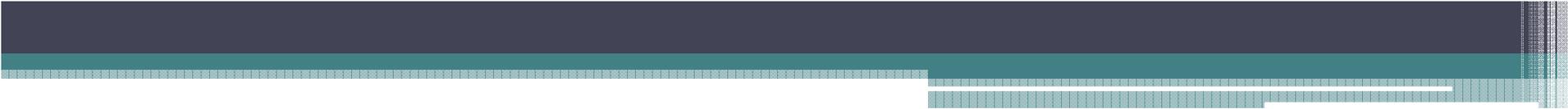
# EPM

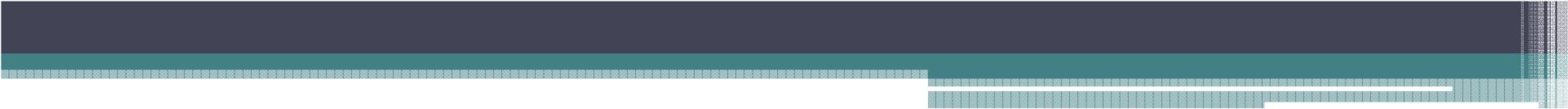
- What is it?
  - EPM is a disease where a single-celled parasite from opossums infects the spinal cord or brain of horses;
  - The parasite (*Sarcocystis neurona*) is passed in the feces of opossums;
  - The horse inadvertently eats contaminated feed or drinks contaminated water.

# EPM

- What is it?
  - There is a second parasite (*Neospora hughesi*) that is also seen in a small number of horses with EPM.
  - *N hughesi* is less common but it occurs in more parts of the world – less common but more widespread.

- What does the disease look like?
  - The basic problems in describing the disease are that:
    - the parasite can cause damage to **any part of the spinal cord or brain and;**
    - The **amount of damage can be very different** from horse to horse from very severe to barely noticeable.
  - Because the spinal cord has very limited ability to repair, horses won't go back to being normal again although they can learn to compensate.

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- What does the disease look like?
    - When the spinal cord is damaged, the local muscles that are controlled by that part of the spinal cord become weak and paralyzed;
    - The damaged spinal cord may not be able to pass information back and forth from muscles to the brain leading to incoordination.

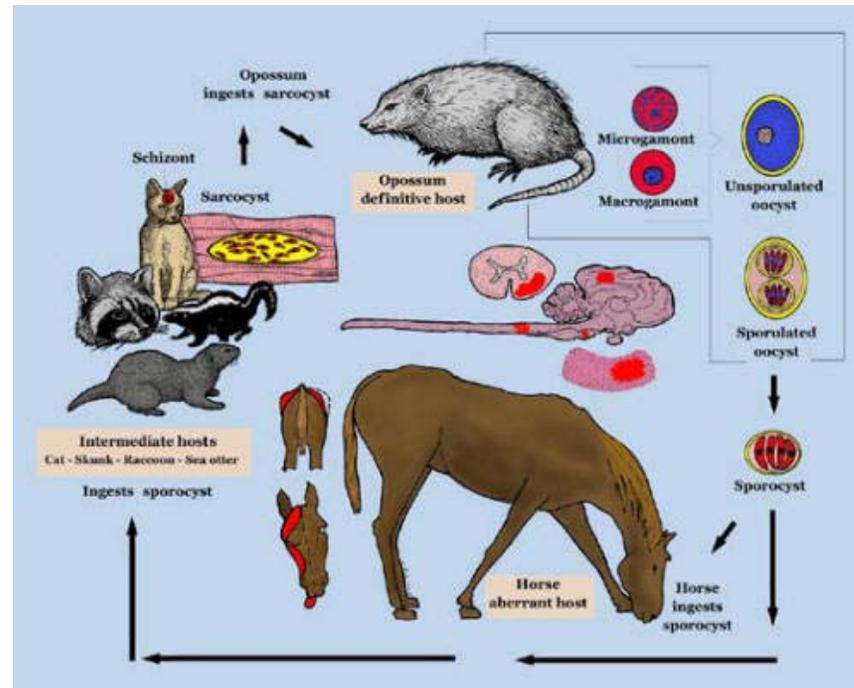
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- What does the disease look like?
    - Often has a sudden onset of illness;
    - Abnormalities can be very mild or very severe;
    - Horse may have difficulty using one or more legs;
    - Horses can be incoordinated and have a difficult time standing or walking;
    - If the brain is affected, the horse can have a head tilt and the muscles of the face can be paralyzed.

- What does the disease look like?
  - Muscles that become separated from their nerve  
shrink

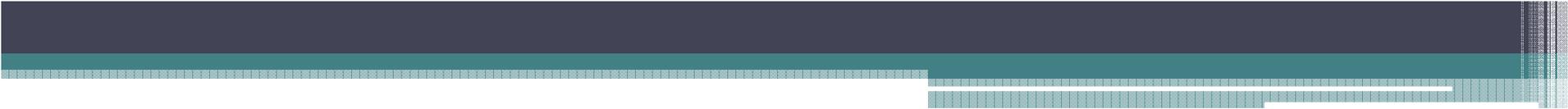


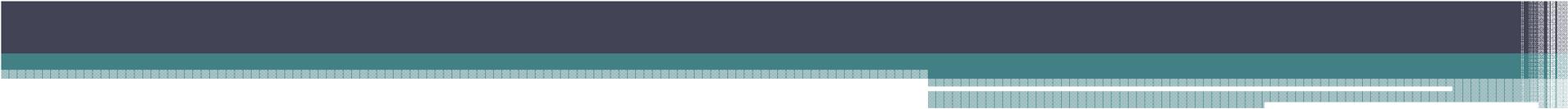
Rood and Riddle

# Transmission cycle of EPM



[epmhorse.org](http://epmhorse.org)

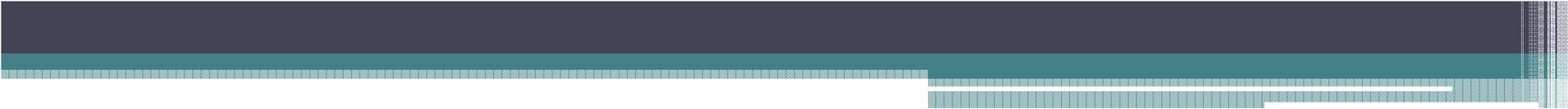
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- How do you know that a horse has EPM?
    - There are other diseases that can look like EPM.
    - There is a test that uses **both** blood and CSF (the fluid that surrounds the brain and spinal cord):
      - If blood is **positive**, it means the horse has been **exposed** to the parasite but **not that its disease is EPM**.
      - It is recommended to test both blood and CSF so that the amount of antibodies in each fluid can be compared to each other.



- How common is it?

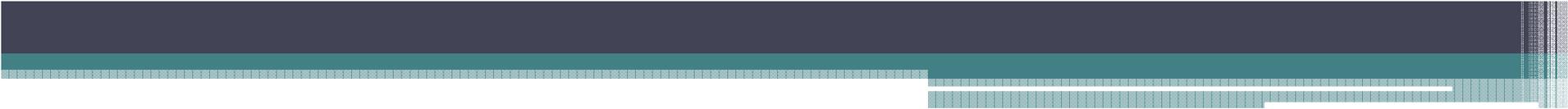
- Blood tests show that many horses have been exposed to the parasite but few horses ever get sick.

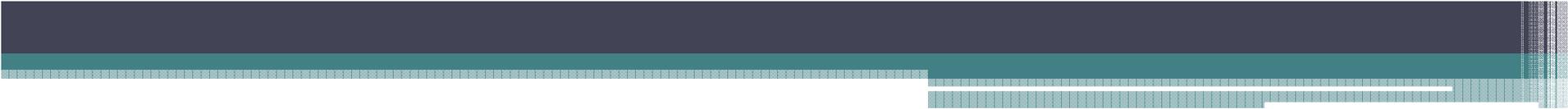
- In North America, 35-65% of horses have positive blood tests that prove they have been exposed to the parasite (*Sarcocystis neurona*);
    - It is estimated that only 1 in every 1000 infected horses will get EPM.
    - Fewer than 5% of horses have been exposed to *Neospora hughesi*.



- **Treatment:**

- There are a number of anti-parasite drugs that can be used to treat horses
  - Ponazuril (Marquis™ paste)
- Treatment usually continues for weeks to months
- Treatment success depends on how severely the horse's spinal cord has been damaged.
  - In one trial with ponazuril, 67% of horses improved within 3 months.

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- **Treatment:**
    - Horses may relapse for up to two years after treatment.

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- How can we protect horses from EPM?
    - There is no vaccine (there was but not now);
    - ‘possum-proofing may help:
      - Horse and pet feed should not be left out because that attracts opossums and rodents;
      - open feed bags and garbage should be kept in closed galvanized metal containers,
      - bird feeders should be eliminated, and fallen fruit should be removed.
      - opossums can be trapped and relocated.

Questions??

Thank you