

The background of the image is a field of tall, golden-brown grasses, likely a meadow or prairie, with some green blades still visible. The text is overlaid on this background.

Kent Equine Educational Program

K.E.E.P.

www.kentcountyhorseleaders.com

Kent County (Michigan) 4-H Horse Leaders Assoc.

Equine Vaccinations

Immunization and Vaccination are used interchangeably.

Why do we vaccinate our equines? To protect our equines from getting sick.

How do vaccinations work to protect our equines? Vaccinations activate the equine's immune system to produce a measurable antibody in the blood. These antibodies help protect the animal from the disease.

Herd Immunity: the resistance to the spread of a contagious disease within a population that results if a sufficiently high proportion of individuals are immune to the disease, especially through vaccination.

Equine Diseases

Eastern Equine Encephalomyelitis: EEE easily ranks among the worst diseases a horse could get. Caused by a virus that is spread mainly by mosquitoes, the disease damages the horse's central nervous system---his brain and spinal cord. And EEE is both fast-acting and highly fatal: After an initial incubation period of five to 10 days, a horse may at first appear listless and lose his appetite. Within 24 hours, he will show neurological signs such as incoordination, head pressing and seizures. A day later, he may be comatose and unresponsive until death. The disease is fatal in 90% of cases (unvaccinated equines). The only treatment is supportive care, including intravenous fluids and corticosteroids. Survivors are likely to have lifelong neurological impairment.

Western Equine Encephalomyelitis: WEE, as the name implies, is found primarily in the western United States. The WEE virus is very similar to the one that causes EEE, and it produces similar signs, including fever and depression, ataxia, head pressing, paralysis and convulsions. WEE, however, is far less deadly than EEE. Around 50 percent of horses diagnosed with WEE recover from the illness, and the survival rate may be even higher because milder cases may never be identified.

Equine Diseases – cont.

Tetanus: or lockjaw, is an often fatal disease caused by the anaerobic bacteria. Tetanus can also affect humans. The disease is not contagious between horses or between horses and humans.

West Nile Encephalitis: Horses contract WNV when a mosquito that has previously fed on an infected bird bites them. West Nile virus cannot be spread directly from horse to horse or from horse to human.

Rabies: A neurologic disease of equids. While the incidence of rabies in horses is low, the disease is invariably fatal (unvaccinated equines) and has considerable public health significance. Exposure occurs through the bite of an infected (rabid) animal, typically a wildlife source such as raccoon, fox, skunk, or bat. Bites to horses occur most often on the muzzle, face, and lower limbs. The virus migrates via nerves to the brain where it initiates rapidly progressive, invariably fatal encephalitis.

Fun Fact: any mammal can get rabies. However, the chance of rabies in an opossum is EXTREMELY RARE. This may have something to do with the opossum's low body temperature (94-97° F) making it difficult for the virus to survive in an opossum's body.

Equine Diseases – cont.

Equine Herpes Virus (EHV/Rhino): a common DNA virus. The two most common species are EHV-1, which causes abortion, respiratory disease and neurologic disease; and EHV-4, which usually causes respiratory disease only but can occasionally cause abortion and rarely neurological disease. EHV-1 is contagious and spread by direct horse-to-horse contact via the respiratory tract through nasal secretions. It is important to know that this virus can also be spread indirectly through contact with physical objects that are contaminated with the virus: human contaminated hands/clothing, contaminated equipment/tack, contaminated trailers, wipe rags, etc.

Influenza: caused by a virus and is one of the most common infectious respiratory diseases of horses. The equine influenza virus causes upper respiratory disease and the horse has a fever—which can be 106 degrees or higher. Spread by nose to nose contact and coughing.

Potomac Horse Fever (PHF): a disease that affects horses during warm weather months, in horses that are kept near rivers, streams, or in irrigated pastures.

Equine Diseases – cont.

Strangles (Equine Distemper): a highly contagious upper respiratory tract infection caused by the bacteria *Streptococcus equi*. The bacteria often infect the lymph nodes around the jaw, causing them to become swollen. In severe cases they can become so swollen that horses struggle to breathe properly, hence the name 'Strangles'. Occasionally, abscesses will develop within other body organs, this is known as 'bastard strangles' and can be fatal. Strangles is a highly contagious disease which can spread quickly through a herd via direct horse to horse contact or indirectly through tack, shared drinking water and on clothing.

Core Vaccinations

These vaccinations are **REQUIRED** of all equines exhibited at the KCYF

- Eastern Equine Encephalomyelitis
- Western Equine Encephalomyelitis
- Tetanus
 - Commonly referred to as 3-1 or EWT
 - Highly effective in preventing the diseases
- Rabies
- West Nile
 - Highly Effective in preventing the diseases

Risk Based Vaccinations

The following vaccinations are **HIGHLY** encouraged for the safety of all of our equines:

- EHV (Equine Herpesvirus/Rhino)
- Influenza
- Potomac Horse Fever
- Strangles

These vaccinations should be discussed with your vet to determine the risk factors that affect your horse: Anticipated exposure, environmental factors, geographic factors, age, breed, use and sex of the horse.

Highly Encouraged Vaccinations

The following vaccinations are HIGHLY encouraged for the safety of all of our equines:

- **Potomac Horse Fever**
 - PHF starts with snail that transmit the bacteria to aquatic insect (mayflies, dragonflies, etc).
 - Rivers, streams, irrigated land die off in pastures and land that equines graze, thus ingesting the bacteria.
 - KCYF location is near two rivers (Flat and Grand).
- **Strangles**
 - Highly contagious through horse to horse contact, as well as human clothing, water troughs, buckets, stalls, horse trailers, etc.
 - Can be transmitted by horses that do not show signs of illness or do not become ill at all.

Reducing Risk

New Horse – make sure to get a health history in writing.

If the health history is not available, make sure to quarantine new horse away from other horses for 14-21 days.

At shows, 4-H practices, Eteam practices, etc: Do NOT share bits, water buckets, grooming tools, etc.

Work with your vet to determine the best vaccinations and schedule for your horse. Your vet is the most qualified person to help you determine the risk of these diseases to your horses.

Other Information

Each manufacturer has their own combination of vaccinations.

3 in 1; 4 in 1; 5 in 1, etc.

Important to know which diseases each combination covers.

If vet receipt gives abbreviations, ask vet to list diseases out.

Most commonly missed vaccination: **Rabies**

Why: Rabies is given as its own injection or combined with PHF.

KEEP Project books

Make sure to include vaccination information in the KEEP project books

If vaccinations are given by vet:

Make sure receipt lists out the diseases included in the injection.

If vaccinations are given by someone other than vet:

Invoice with serial no. written on by the vaccination.

Must also include date when it was given.

Horse's name must be on invoice with 4-H Member's name.

Copy of label/package must be included showing the serial number.

Resources

American Association of Equine Practitioners

<https://aaep.org/horse-owners>

Equine Disease Communications Center

<http://www.equinediseasecc.org/>

Michigan Department of Agriculture

https://www.michigan.gov/mdard/0,4610,7-125-48096_48097_68355---,00.html