



# Your guide to equine vaccines

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What you need to know to plan the best protection for your horse or pony

# What is a vaccine?

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Vaccines are developed to help provide immunity against disease.

Just like humans, horses' bodies have immune systems that defend against diseases. When the immune system encounters a disease for the very first time it can have a very strong reaction. This reaction is what causes the symptoms of the disease—and what makes the horse (or person) sick. Luckily, the immune system has a “memory,” so when it encounters a disease again it can fight back more easily, without causing symptoms or sickness.

Vaccines “teach” the immune system how to fight diseases without having to encounter the real diseases for the first time. In this way, vaccines strengthen the immune system so the body is better at fighting off diseases or illnesses.

Vaccines can be administered to horses in several ways, including injections into the muscle or application into the nostril.

## Are there other ways I can protect my horse?

Supportive care, including good nutrition, proper housing, regular exercise, clean water, and a clean environment all help to keep your horse or pony healthy.



These practices are important parts of your daily care routine and can help minimize disease exposure as well as support your horse's immune system.

But they are only part of the equation when it comes to looking after the complete health of your horse.

# Vaccination makes sense for every horse

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Horses can contract infectious diseases in two ways: from other horses, and from their environment. Even horses that live alone can contract infectious diseases from contaminated feed, water, or soil, or from infected insects or wild animals.

That's why prevention is important. Infectious diseases can be devastating, and they are much easier (and less expensive) to prevent than to treat. That's why an effective vaccination program, planned by a veterinarian who knows you and your horse, is the cornerstone of your horse's annual health plan.

## When should I vaccinate my horse?

It takes time, usually a few weeks, between when a vaccine is given and when the animal is expected to be immunized. That makes the timing of the vaccine very important.



A vaccination program should be completed two or three weeks before there's a risk of exposure to a certain germ. For most horses, that means vaccination happens in the spring, ahead of the busy riding season.

Many vaccines will need to be administered every year to ensure your horse remains protected from certain infectious diseases.

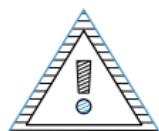


# How do I know what vaccines my horse needs?

Like most horse owners, you might ask yourself this question every year. After all, when your horse is healthy and happy, it's easy to postpone annual vaccines. However, vaccination is essential to keep your horse healthy—and in some cases, alive—for the long term.

Your veterinarian is an important resource when developing a vaccination protocol that is right for your horse.

Take the following factors into consideration when discussing vaccination with your veterinarian:



## Exposure to risk

The age, breed, and sex of your horse all have an impact on his or her risk of contracting certain diseases. Additionally, your horse could be exposed to environmental risks at your farm, ranch, stable, or beyond.

Some questions to consider when determining your horse's specific risk factors include:

- Does your horse share facilities or equipment with other horses?
- What is your horse's daily schedule like?
- Is your horse often in the field at daybreak or dusk?



## Geographical region

Your geographical region can impact the risk of your horse being exposed to certain diseases. Factors to consider include:

- Does your region contain an environmental element that could indicate a greater risk of contracting a disease?
- Have there been recurrent outbreaks of a specific disease in your region in the past? Take, for example, an alarming increase in the number of ticks in certain areas, or favourable weather for the reproduction of mosquitoes.

Your region may also be important in determining the ideal time of year to vaccinate.



## Dire consequences

It's important to also consider the potential consequences of not vaccinating your horse.

- Is your horse exposed to potentially life-threatening diseases?
- Would you be putting many horses at risk if there were a disease outbreak?
- What would the financial implications be if your horse did become gravely ill and unable to function for weeks, or possibly even months?

How you answer these questions may help you determine which vaccines are appropriate for your horse.

**Consider the factors that play a role in your horse's life and talk to your veterinarian about the best strategy to protect your horse.**



# Core vaccines

The risks for certain infectious diseases are common to horses all over North America—and the consequences of these diseases are severe. With that in mind, the American Association of Equine Practitioners (AAEP) has defined four core vaccinations that veterinarians consider basic and essential for all horses.

Core vaccines have demonstrated efficacy and safety, giving horses a high level of patient benefit and a low level of risk.



## Eastern/Western Encephalomyelitis (EEE/WEE)

Equine Encephalomyelitis is a viral infection transmitted to horses by mosquitoes. It causes severe inflammation of the brain and spinal cord, and most horses with EEE or WEE do not survive. Even those that do can have long-lasting neurological problems.

### **Symptoms can include:**

- Behavioural changes, listlessness, depression
- Fever (moderate to high)
- Loss or lack of appetite
- Sensitivity to stimuli (sound, touch)
- Teeth grinding
- Central nervous system signs, such as head pressing, dementia, circling, and blindness



## West Nile Virus (WNV)

West Nile Virus is the leading cause of encephalitis (inflammation of the brain) in North American horses. It is a viral infection transmitted to horses by mosquitoes. Some horses infected with WNV may show only mild symptoms; however, in others the disease can be severe and potentially fatal.

### Symptoms can include:

- Fever
- Incoordination/ataxia or the loss of control of body movements, particularly of the hind limbs
- Reduced appetite
- Muscle tremors, particularly affecting the face, neck, and/or shoulders
- Depression, overall dullness
- Head pressing, inability to stand, convulsions, and/or any other signs of neurological disease



## Rabies

Rabies is a fatal neurological disease that can infect virtually all mammals (including humans). Rabies is usually transmitted in saliva from the bite of an infected (rabid) animal. Bites to horses most often occur around the muzzle, face, or limbs. The transmitted virus migrates to the brain, causing encephalitis (swelling of the brain).

### Symptoms vary widely, but can include:

- Depression
- Apparent weakness
- Muscle tremors and spasms
- Colic
- Incoordination
- Paralysis
- Lameness
- Urinary incontinence

**Rabies is a fatal disease that is preventable by vaccine.**



## Tetanus

Tetanus, also known as "lockjaw," is an often-fatal disease that occurs when a wound becomes infected with bacterial spores of *Clostridium tetani*. Some cases of tetanus occur from wounds so small they are not noticed. The spores of the bacteria can be found in soil everywhere.

### Symptoms can include:

- Wide-based (saw horse) stance
- Hyper-reactivity to sound and light
- Difficulty urinating and defecating
- Anxiety
- Muscle rigidity
- Inability to walk

Of all domestic animals, horses are the most susceptible to tetanus. That's why, of all the core vaccines, tetanus is considered the most basic for all horses.

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**Core vaccines are considered basic and essential for all horses.**



# Risk-based vaccines

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The AAEP recognizes a second group of risk-based vaccinations that should be administered based on the risk your horse has of contracting a disease and the potential consequences. Horses that live in or travel to high-risk areas (including performance horses) are considered to get the most benefit from risk-based vaccines.



## Potomac Horse Fever (PHF)

Potomac Horse Fever is an acute bacterial infection caused by the microbe *Neorickettsia risticii*. Horses become infected by ingesting infected insects, which may reside in their water or feed.

PHF is seasonal. Most cases occur in July, August, and September, but there is a risk of occurrence from late spring to early fall in temperate areas.

PHF only occurs in geographic areas where infected snails and carrier insects live. Once PHF is seen in an area, it usually means that other horses in the same geographic area will be at risk of PHF in future years.

## Risk-based vaccines

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### Equine Influenza (EIV)

Equine Influenza (or flu) is a highly contagious acute viral infection of the respiratory tract, similar to human flu. It is most commonly transmitted directly from horse to horse via respiratory secretions (droplets from coughing or nasal discharge), but can also be transmitted indirectly via contaminated equipment and other objects, or by people via contaminated hands or clothing. Equine Influenza tends to spread rapidly through groups of horses in close contact.

Most horses recover within a few weeks, although some may develop a more severe illness. Performance horses experience the greatest impact due to loss of condition and competition time.

#### Symptoms can include:

- Fever
- Behavioural changes, depression
- Muscle stiffness
- Lack of appetite
- Nasal discharge, initially serous, but may become mucoid
- Cough

**EIV is considered the most economically detrimental respiratory disease in horses. Therefore, many veterinarians recommend that all horses should be vaccinated against EIV, unless they live in a closed and/or isolated facility.**

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#### FOR MORE DISEASE INFORMATION

Visit [bicanadaequine.ca](http://bicanadaequine.ca) or speak to your veterinarian.



## Equine HerpesVirus 1 and 4 (EHV)

Equine HerpesVirus, also called rhinopneumonitis or “rhino,” is a viral infection that causes respiratory illness that can be easily confused with flu. EHV-1 and EHV-4 are spread by direct contact and through respiratory and nasal secretions.

EHV-1 causes respiratory disease, abortion, neonatal death, and neurological disease. EHV-4 is associated mainly with respiratory disease.

### **Symptoms can include:**

- Fever
- Nasal discharge
- Depression
- Cough
- Inappetence

### **EHV-1 can also cause:**

- Outbreaks of abortion
- The birth of weak foals
- Equine Myeloencephalopathy, an infection of the horse's spinal cord and brain



## Strangles (*Streptococcus equi*)

Strangles is a highly contagious bacterial upper-respiratory infection caused by the bacterium *Streptococcus equi*. Foals, weanlings, and yearlings are at the highest risk for strangles.

Strangles is spread by direct contact with infected horses, which may continue to shed the bacteria for weeks after they appear to recover. It is also spread through contact with any surface or object that may have been contaminated by an infected horse.

Strict biosecurity and hygiene is important in an outbreak situation in order to avoid further transmission.



# Do vaccines provide 100% protection?

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Unfortunately, not always. The effectiveness of a vaccine in inducing immune protection can be affected by many variables, such as nutrition, stress, and subclinical infection. The level of the horse's immunity at the time of exposure compared to the level of the infectious agent is also an important factor.

In most cases, the increased level of immunity induced by a vaccine should be sufficient to fight off the disease and reduce its severity. However, animals that are sick at the time of vaccination may not mount a protective immune response to any vaccine(s) they are given, and may therefore not have sufficient immunity to resist infection.

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## DID YOU KNOW?

Boehringer Ingelheim offers a vaccine assurance program, providing you with peace of mind when choosing vaccines for your horse. For more details, speak with your veterinarian.



**DON'T WAIT, VACCINATE.**  
Protect your time together.

VACCINES	Core vaccines					Risk-based vaccines						
	Eastern/Western Equine Encephalomyelitis (EEE/WEE)	Equine West Nile Virus (WNV)	Tetanus	Rabies	Richmond /2007	Ohio /2003	Newmarket /2/93	Ky/95	EHV-1	EHV-4	Potomac Horse Fever	Strangles (S. Equi)
Vetera® Gold <sup>XP</sup>	✓	✓	✓		✓	✓		✓	✓	✓		
Vetera® 5 <sup>XP</sup>	✓		✓		✓	✓		✓	✓	✓		
Vetera® EWT + WNV	✓	✓	✓									
Vetera® EWT	✓		✓									
Vetera® WNV		✓										
Vetera® 2 <sup>XP</sup>					✓	✓		✓	✓	✓		
Calvenza® EIV/EHV						✓	✓	✓	✓	✓	CP	
Potomavac™											✓	
Potomavac™ + Imrab®				✓							✓	
Imrab®				✓								
Strepvax™ II												✓

**CP:** cross-protection

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STREPVALEX™ II



# What side effects could my horse experience?

It is fairly common for horses and ponies to experience mild and temporary side effects after receiving a vaccination. These signs are all perfectly normal and are evidence that an immune response has been stimulated.

## Common side effects include:

- Localized muscle soreness and/or swelling
- Fatigue
- Fever
- Loss of appetite
- Lack of energy or alertness

In rare cases, more serious side effects can occur. Over-reaction of the immune system may lead to hives, difficulty breathing, colic, and even collapse.

Monitor your horse closely for the first few hours after it receives a vaccine or other immune stimulant. If you observe an abnormal reaction, call your veterinarian immediately.

Vaccines are safe and efficacious when used as directed. If you have any questions, speak to your veterinarian.

**Vaccination is the cornerstone of a comprehensive healthcare program for your horse.**

## FOR A HELPING HAND

Visit [bicanadaequine.ca](http://bicanadaequine.ca), a resource for everything you need to know about your horse's health.

