

# 3-Legged Lameness in Horses: The Likely Players

Horses can (and will) find unique ways to injure themselves, but in this article we'll highlight four of the most common causes of sudden lameness.

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Any horse that suddenly becomes three-legged lame should be evaluated as soon as possible; this allows his veterinarian to treat pain more effectively, prevent complications, and improve recovery rates. | Photo: Kevin Thompson/The Horse

## *4 reasons your horse might be suddenly and overtly lame*

A veterinary anatomist once told his young class, “the horse was invented at 4 p.m. on a Friday.” While he was clearly trying to be humorous, any horse owner will admit there’s a layer of truth to this statement.

Horses injure themselves frequently. For equine veterinarians one of the most common emergencies is the suddenly, obviously lame horse. As opposed to the

sometimes subtle lamenesses only detected under saddle or during a lameness exam, a horse that’s “three-legged lame” is acutely (and alarmingly) non-weight-bearing. These horses can be profusely painful and reluctant to move, and they could have been perfectly sound that morning.

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possible; this allows his veterinarian to treat pain more effectively, prevent complications (such as overloading the opposite limb, increasing the risk of developing the painful hoof disease laminitis), and improve recovery rates.

Horses can (and will) find unique ways to injure themselves, but in this article we'll highlight the most common causes of sudden lameness.

## While waiting for your vet:

- Pick out the affected hoof;
- Check for heat, as this can be indicative of inflammation;
- Put your horse in a quiet, confined area until he or she arrives.

## Subsolar Abscess

Many veterinarians, myself included, will say subsolar abscesses are the most common source of sudden non-weight-bearing lameness. This condition occurs when foreign debris gets inside the hoof capsule, usually where the sole meets the wall. The debris can cause inflammation, and the hoof reacts by forming a pocket of pus. Pressure builds and can be immensely painful as the pocket migrates

through hoof tissues. Therefore, afflicted horses are reluctant to bear weight on the abscessed hoof.

Abscesses can be secondary to hoof bruises, penetrating injuries, or tight shoe nail placements. Horses with subsolar abscesses regularly have increased digital pulses and usually respond positively to hoof testers.

While subsolar abscesses can be painful for the animal and frustrating for the owner, horses typically recover from them well. Treatment is aimed at draining the abscess, which relieves the pressure and makes the horse immediately more comfortable. Your veterinarian or farrier will attempt to pare out the tract with a hoof knife (never try this yourself). If the tract is too deep or the hoof too hard, your veterinarian might recommend other treatment methods. Routine remedies include [soaking the foot with Epsom salts](#), [poulticing the hoof](#), and [placing it in a boot or wrapping it with self-adhesive bandage and duct tape](#), sometimes even with a diaper underneath. Veterinarians might prescribe anti-inflammatory medications to decrease pain,

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though some believe this hampers abscess drainage.

## Fracture

Two or three decades ago, owners and veterinarians were limited in helping horses unlucky enough to suffer fractures. But with advancements in diagnostics, imaging, and surgery, a fractured leg is no longer a death sentence.

While bones just about anywhere in the horse's body can break, limb fractures are most likely to cause sudden lameness. **Kicks from pasturemates** or simply stepping wrong and stressing the limb are likely causes. Falls during competition, on slick surfaces, or from a romp can all result in fractures. Certain diseases can weaken bones and leave them more susceptible to breaks called pathological fractures.

Horses that suffer limb fractures can be in immense pain, reluctant to bear weight on the affected leg, and have extensive swelling around the site. Even the kindest of horses resents palpation of the broken leg. In these circumstances your veterinarian will likely reach for the X ray machine. **Radiographs** can help the vet not only diagnose a fracture quickly but also obtain vital information about its location and severity. An incomplete fracture is a partial break that does not travel through the entire bone and offers the best rate of recovery. A simple complete fracture is a break across the entire bone surface. A comminuted fracture, one of the more serious types, occurs when the bone breaks or splinters into two or more fragments. These fractures might be too serious to treat, and humane euthanasia is sometimes the best option for the horse.

While X rays are the quickest and most practical way to diagnose a fracture in the field, technology has gotten much more sophisticated over the years. Erica Secor, DVM, MS, Dipl. ACVS-LA, a surgeon at Wisconsin Equine Clinic and Hospital, in Oconomowoc, deals with fractures on a regular basis.

"The advent of **standing MRI** and CT now allows for surgeons to have an improved 3D image of a fracture configuration before the need to put a horse under anesthesia (for surgery)," she says.

These advancements allow surgeons to get a much more complete clinical picture of each case.

While some fractures heal with time, rest, and/or stabilizing bandages, many patients benefit from a surgical evaluation at a referral hospital. Surgery might include simple fragment removal or a more invasive approach.

“Significant research goes into the design and configuration of various plates, screws, and other hardware used in fracture repair,” says Secor. “With the advent of larger specialty hardware, the strength of our fracture repairs has increased exponentially.”

Fractures can be one of the most devastating injuries a horse can sustain. However, “with continued advances in our technology and repair techniques, more and more of our patients with previously fatal fractures may have a better chance at not only survival but continuing on as an athlete,” Secor says.

## Cellulitis

What makes a cellulitis case so urgent is it can look like a broken leg to the untrained eye. Cellulitis is infection of the underlying soft tissue of the skin. While not unique to horses, it’s especially common in them. Many initiating factors can play a role in establishing infection. Limb trauma, puncture wounds, and **pastern dermatitis (aka scratches)** have all been associated with cellulitis cases.

Most commonly, only one limb— usually a hind limb —is affected. Infection can occur rapidly without warning and progress to partial or complete limb swelling. Heat in the limb is a hallmark of the condition. The horse can be anywhere from slightly lame to completely non- weight-bearing; cellulitis can be exquisitely painful for the horse.



Hallmark signs of cellulitis include heat and partial to complete limb swelling. | Photo: Courtesy Dr. Kennon Keckler

Cellulitis cases can progress and worsen very quickly, warranting prompt care. “Early, aggressive treatment shortens treatment time (and, by extension, saves money) and increases the chance of total treatment success,” says Tracy Norman, VMD, Dipl. ACVIM, of Blue Ridge Equine

Clinic, outside Charlottesville, Virginia. Antibiotics and anti-inflammatory medications are key to getting the infection under control. “If the bacterial infection and resulting immune response are allowed to become chronic, permanent damage can occur to the local lymph vessels and lymph nodes, increasing the probability that the condition will periodically plague the horse for the rest of its life as **lymphangitis**,” Norman says.

## Septic Arthritis

Also known as a “septic joint” or “joint ill,” septic arthritis can be one of most devastating causes of lameness on this list. Simply put, it is a bacterial infection of a joint, resulting in inflammation, pain, and non-weight-bearing lameness. If left untreated, it can render the affected joint useless.

Septic joints occur in various circumstances. Foals contract the disease much differently than do adult horses.

## ***Foals***

Septic arthritis is a common cause of lameness in foals. Often, owners call their vets reporting that a foal has a massively swollen joint. The youngster might also have a low-grade fever.

In foals, septic arthritis is secondary to a bacterial infection in the bloodstream. Foals do not have an innate immune system at birth. Instead, their protective antibodies come entirely from the mare’s **colostrum, or first milk**, via a process called **passive transfer**.

“Colostrum is packed with powerful antibodies that provide protection to the foal during the first few months of life, but it has to be ingested and absorbed within the first 18 to 24 hours,” says Brad Back, DVM, owner of Abington Equine Hospital, near State College, Pennsylvania. “If the foal has failed to consume adequate colostrum, we will consider him as suffering from failure of passive transfer of antibodies.”

Bacteria is all around a barn, and foals most commonly pick up pathogens through ingestion, inhalation, or contamination of their umbilical stump. The bacteria can then enter the bloodstream, a condition known as **septicemia**. Once here, they essentially have access to the foal’s entire body and later might settle near the joints, causing the clinical signs noted. Along with swelling around the affected joints, these foals might have other apparent issues, such as respiratory or gastrointestinal signs.

“At this time, if caught early enough, additional high-quality colostrum can be administered, or active immunity will be administered in the way of intravenous equine plasma,” says Back.

## ***Adults***

Septic joints in adult horses are likely from penetrating trauma to the joint. This kind of injury allows bacteria to enter and infect the joint directly.

Stepping on a nail is a very common cause

### **Did You Know?**

Feeling for a digital pulse is a useful and simple method for evaluating hoof problems. The digital arteries run down each leg. You can feel them along the side and back of the pastern and fetlock. In event of hoof inflammation,

of septic joints. If this happens to your horse, never remove the nail from the hoof by yourself. First, have your veterinarian come out to take X rays and determine if the structure entered a joint.

those arteries become “clogged,” and their pulse increases. This is called a bounding pulse and can be a sign of foot pain.

Septic joints can also be secondary to joint injections, which veterinarians administer regularly to maintain performance horses' joint health and to treat lameness conditions. Entering a joint with a needle always runs the risk of infection.

“Numerous precautions are taken to minimize joint infection,” says Ryan Penno, DVM, a sports medicine veterinarian and owner of the Equine Clinic at OakenCroft, outside Albany, New York. “These include sterilizing the skin surrounding the injection site; careful sterile handling of medications, syringes, and needles; and adding antimicrobial compounds to the therapeutic mixture.”

Fortunately, joint-injection-related sepsis is rare. The most recent studies suggest only 0.1% of joint injections become septic. Many veterinarians go years without encountering a septic joint. While these numbers might comfort owner and veterinarian alike, the risk remains.

Regardless of the cause, septic arthritis treatment includes administering antibiotics both systemically and directly into the joints. Like fractures, septic joint cases are best managed at a referral hospital. There, specialists can treat the joints with a procedure known as lavage, in which they flush the joint with fluid via needles.

If the horse continues to worsen after antibiotics and lavage, arthroscopy might be the next step. With the horse under general anesthesia, the veterinarian uses a tiny camera to evaluate the infected joint and uses surgical instruments to remove any debris secondary to the infection.

This procedure increases recovery rates and promotes joint healing.

## Take-Home Message

Always consider three-legged lameness an emergency. Each of the possible causes listed has different treatment protocols and prognoses. Having your veterinarian examine your horse in one of these scenarios as soon as possible is the right course of action.

