

Stumbles and Missteps: What's Causing Your Horse's Clumsiness?

Is your horse's clumsiness a simple matter of long toes and uneven ground, or is a career-limiting condition to blame?

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Just like humans, horses can misjudge a step, overlook an obstacle, or simply have a clumsy moment out of distraction or fatigue. | Photo: iStock

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It happens every now and then: A careless misstep or an unexpected surface change

causes your horse to crumble a little under you, before he catches himself and keeps going. If you both recover just fine from the blunder, you might laugh and call him clumsy.

That's when stumbling is okay. "It's like a human missing a step over a sidewalk crack—it's not really a big deal in cases like that," says Amy Johnson, DVM, Dipl. ACVIM (Large Animal and Neurology), assistant professor of large animal medicine and neurology at the University of Pennsylvania's New Bolton Center, in Kennett Square.

But when it happens again and again, or when it leads to serious falls, stumbling becomes not okay. Often the sign of an underlying orthopedic or neurologic problem, repetitive or severe stumbling can be dangerous for both horse and rider.

Every Horse Stumbles

Musculoskeletal movement is never completely without error. Just like humans, horses can misjudge a step, overlook an obstacle, or simply have a clumsy moment out of distraction or fatigue.

“As the limb should be advanced forward, the toe catches the ground, and the horse often knuckles over a bit toward the fetlock on that foot and quickly has to advance the other front foot to catch its weight,” Johnson says.

While this might sound dramatic, it’s usually nothing to worry about, says Sue Dyson, MA, Vet MB, PhD, DEO, FRCVS, head of clinical orthopedics at the Animal Health Trust Centre for Equine Studies, in Newmarket, U.K.

“The occasional stumble is not unusual, particularly on uneven ground,” she says. “For example, if it only happens two or three times individually over the course of a month, then that may not be a cause for concern.”

Horses are good at catching themselves—probably better than humans, partly due to the fact they have four feet instead of two, Dyson says. And they rarely injure themselves during those missteps. Unless the horse is showing signs of pain or irregular movement, there’s no reason to dismount and give him a once-over after the random stumble.

But when stumbling becomes more common or dangerous, it’s time for some scrutiny.

“If it’s happening over and over again, that’s certainly not normal,” Dyson says. “Stumbling two or three times with every ride, for example, merits veterinary investigation.”

Bad recoveries should also raise concern, Johnson says. “If the horse goes down to its knees or seems to lose its balance and have difficulty regaining it, then it’s absolutely something that the rider should bring to the attention of the horse’s veterinarian,” she says.

Hoof Problems: The Easy Explanation

Long toes or other hoof issues should be the first line of attack when considering possible stumbling causes, says Dyson.

For horses to place their feet correctly, they need to activate sensory receptors in their heels by putting weight on them, she says. The activation gives them better proprioception—the ability to feel and know where they're putting their feet. When toes are long, those sensors might not get activated like they should.

“During toe-first or flat-footed landings, activation of these sensory receptors may be less,” Dyson says.

When Stumbling Signals Pain

A horse that modifies his foot placement to avoid foot or limb pain can also experience decreased receptor activation. “Some horses with foot pain in the front will tend to land toe-first in a way to minimize their pain, and that’s probably why they start to stumble,” Dyson says.

Other orthopedic issues might include **navicular pain**, fetlock pain, ligament issues, tendinopathies, musculoskeletal issues higher up the leg, or even lower **neck pain**, which can impact the muscles that carry the front leg through the non-weight-bearing phase of the stride, causing toe-dragging or -catching.

Repeat stumbling can not only put you and your horse at risk of injury but also create a welfare issue because the horse is working in pain.

What’s more, the pain isn’t likely to improve on its own, Dyson says. So the repeat stumbles could be warning signs that you need to get a problem fixed before it becomes overt lameness.

With orthopedic-related stumbling, horses tend to trip over the same foot or same two feet every time, under similar conditions (same gait and/or footing), says Johnson.

“If a horse has really severe navicular disease in the right forelimb, for example, that’s the foot they’re usually stumbling on,” she says.

When Stumbling Signals Neurologic Issues

Horses can also stumble because of **ataxia**—a lack of coordination caused by neurologic dysfunction. Ataxic horses lose proprioception of foot placement, Dyson explains.

An ataxic horse won’t always be a stumbler, says Johnson. But those that do stumble frequently have more difficulty recovering than neurologically sound horses. “I’ve had multiple owners say things like, ‘We were cantering around a corner on footing that was a

little slick, and the horse's limb slid, but I wouldn't have expected my other horses to fall, and this horse fell all the way to the ground," she says.

Ataxic horses' stumbling is also more likely to be unpredictable, she adds. It won't necessarily be associated with the same foot or the same kind of situation. And frequently these horses have other signs of ataxia, such as poor coordination even when not under saddle.

The Diagnostic Work-Up

The first step, after ruling out farriery issues, is deciding if it's a neurologic or orthopedic problem. Veterinarians base this determination on history, along with lameness and neurologic exams. | Photo: Stephanie L. Church

If your horse is a repeat or risky offender, your veterinarian can perform a general evaluation on the farm to confirm that the degree of stumbling isn't normal, Dyson says. But he or she might refer you to a specialist to consider all the possible causes of the stumbling.

In fact, an accurate diagnosis might require an entire clinic full of specialists, because stumbling itself is not a diagnosis but a symptom of a variety of possible problems, says Johnson. "When stumbling horses come into our clinic, it's not unusual to have multiple clinicians involved that evaluate them to try to find out what the most likely cause is," she says.

The first step, after ruling out farriery issues, is deciding if it's a neurologic or orthopedic problem. Veterinarians base this determination on history, along with lameness and neurologic exams. However, lameness exams can be tricky with stumbling cases, says Dyson. Veterinarians often use local anesthesia to block the pain that would cause lameness—the idea being that when the horse is pain-free, the lameness disappears temporarily. But that local anesthesia could backfire in a stumbling exam.

"Local anesthesia reduces proprioception," Dyson says, adding that this is particularly evident with hind-limb issues. "We have observed that hind-limb nerve blocks may not abolish a lameness-induced toe drag and ... may sometimes accentuate a toe drag. Stumbling and tripping behind may be accentuated, despite improvement in baseline lameness by diagnostic analgesia."

If the nerve block evaluation fails, veterinarians might use video to better assess the gait and foot placement "to determine why and how the limb lacks stability," she says.

During a neurologic evaluation, the veterinarian must consider all neurologic pathways, from the brain to the spinal cord to limb muscles, says Johnson. “Most of the horses I work up have a spinal cord problem that is interfering with the transfer of information from the brain to the leg and back again, which is causing them to misstep or misplace their feet,” she says. “But sometimes they’ve injured either the nerves traveling down the limb or the muscles of the limb such that the nerve muscle connection is interrupted.”

Infectious diseases such as **equine protozoal myeloencephalitis (EPM)** can also cause ataxia-related stumbling, she adds.

“The appropriate diagnostic procedures for a suspected neurologic case that stumbles with the front limbs would include doing radiographs (X rays) of the neck and a spinal tap to look for evidence of EPM (protozoal infection), and maybe more advanced imaging like myelography or CT scans,” she says.

Stopping the Stumble

With the proper early treatment there’s hope for resolving many orthopedic issues, says Dyson, depending on the root problem. With incoordination from neurologic dysfunction, though, there’s less optimism. “We cannot cure ataxia,” she says.

That being said, veterinarians can treat some forms, such as EPM-related ataxia. Also, depending on the kind of lesion, some horses can improve through neck joint injections, Dyson adds.

Surgery can help relieve pressure on the spinal cord, as can anti-inflammatory drugs and management changes (such as reduced exercise or feeding at wither-level instead of off the ground), Johnson says. But that can’t undo what’s already done—only prevent it from getting worse. “You can’t correct damage to the spinal cord once it’s occurred because neurons don’t regenerate,” she says. “Once they’ve been destroyed they’re gone forever.”

Current research is focusing on ways to make neurons grow or heal better, notes Johnson, but hasn’t translated into use in horses yet.

Applying a rubber tip to the frog could help the horse regain some sense of proprioception, says Dyson, citing the work of Robert M. Bowker, VMD, PhD, at Michigan State University. “You can improve proprioceptive feedback in horses that have lost it in their feet by applying pressure to the frog because that’s where the neuroreceptors are,” she says. “If a finger-sized piece of rubber is attached temporarily to the pad at the heel, within one or two strides the step extends forward maximally, as the horse ‘realizes’ the importance of this area of the foot,

by activation of the sensory receptors.” The rubber pads improve proprioception within a few uses and can then be removed. The benefits, she says, continue after removal.

Walking your horse over poles might also help improve proprioception. But the effects in an ataxic horse will be limited due to his abnormal neural feedback, Dyson says.

If the neurologic horse continues to stumble, it might be time to make the difficult decision to retire him. “Unless something can be done to improve the problem, I don’t recommend continuing to ride the horse,” Johnson says.

Avoiding a Bad Trip

While stumbling will happen no matter what we do, we can take steps to minimize it in otherwise healthy horses. First, our sources say, make sure you maintain good hoof care and ensure the horse is well-trimmed or shod.

Also, don’t assume **barefoot horses** trip less or vice versa. It all depends on what makes the horse feel best. “If they’re uncomfortable they’re more likely to stumble because they’re more likely to alter their foot placement,” Dyson says.

That’s even truer in ataxic horses, Johnson adds. “If you have a mildly neurologic horse that is also foot-sore, then he’ll stumble and perform worse than a mildly neurologic horse that has comfortable feet,” she says. The best choice to make for your horse depends on what keeps him most comfortable.

Johnson says you can also minimize stumbling with proper training. “If you ask a horse to do more than his physical conditioning permits, then, as he fatigues, his risk of stumbling and not picking his feet up high enough will increase,” she says. “If you’ve ever seen marathon runners staggering down the home stretch, it’s the same sort of thing. If you have enough muscle fatigue then your foot placement will suffer for it.”

Take-Home Message

Your horse is going to stumble from time to time. But don’t panic. If he recovers easily and doesn’t make a habit of it, his musculoskeletal and neurologic systems likely fix his missteps automatically. But when stumbling becomes common or leads to falls, it’s time to get the veterinarian involved. Treatment can resolve many causes of stumbling, sometimes even



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fixing lameness issues before they become apparent. When it can't, retiring the constant stumbler will safeguard his health and welfare as well as his rider from the danger of serious falls.