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All Stocked Up

by: Marcia King

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It happened again: Your horse was fine for the entire weekend of riding, but when you got him ready for another weekend packed with activities, you discovered his hind limbs were swollen. You know it's not overuse; the boarding barn provides limited turnout, and you usually can't ride Monday through Friday, so your weekend warrior gets plenty of stall rest during the week. He's not lame, and after you start working him, the swelling goes down, but still, it's a concern. One of the other riders said your horse is "stocking up," but that it's nothing to worry about. What's going on?

Stocking Up

"Strictly speaking, stocking up is merely swelling of the lower limbs due to decreased activity and pooling of blood and lymph (clear fluid drained from tissues, that circulates within the lymphatic vessels and contains fats, proteins, and specialized cells) in the extremities," says

Jennifer L. Davis, DVM, PhD, Dipl. ACVIM, ACVCP, clinical assistant professor of equine medicine and clinical pharmacology at North Carolina State University College of Veterinary Medicine. "It is a very benign condition caused by lack of movement. It's not painful for the horse and doesn't cause changes in attitude or appetite."

Stocking up is separate from--and should not be confused with--other veterinary conditions that result in edema (fluid swelling) of the lower limbs (see "When It's Not Stocking Up" on page 78 for further details).

The condition, also known as static congestion, generally occurs after horses that have had normal activity are stall-bound for two or three days, notes racehorse veterinarian Steven Allday, DVM, of Elite Veterinary Medicine in Simpsonville, Ky. "It seems to be more common in heavy-muscle horses like Quarter Horse types," he explains. "They have more body mass over a much smaller foot and/or lower limb; it takes a lot more activity to move lymph congestion back up the peripheral limb. Older horses also seem more predisposed."

Usually after the horse gets out and moves around for a short while, the static congestion goes away, and there are no adverse effects. But swelling that continues for five to seven days or more can lead to secondary skin problems. "The swelling can create skin folds, which retain moisture and trap dust, dirt, and contaminants," explains Allday. "Eventually, heat builds up in those folds and serum (the clear fluid portion of blood plasma) can leak out, creating a breeding ground for bacteria, leading to secondary skin infections."

Clinical Signs

Horses that stock up usually only have edema in the lower legs, extending only from the coronary band to the fetlock joint, or occasionally to the tarsal (hock) or carpal (knee) joint, Davis says.

Swelling generally affects either both hind limbs or all four legs, but not just a single limb. Allday states, "The swollen areas are not very hot or painful, although the horse may be a bit stiff."

Aside from symmetrical edema and slight, temporary stiffness, there are no other clinical signs—no fever, lethargy, depression, lasting or pronounced lameness, etc.

Diagnosis

Diagnosis is based on history (Has this problem occurred before? Does your horse have a routine of activity followed by days of stall rest?), clinical signs (areas of swelling, degree of lameness, a change in the horse's attitude, presence of additional signs), and physical exam of joints and supporting structures (shoulders, knees, hips, hocks, suspensory ligaments, tendons, etc.) to make sure the edema is not a compensatory disorder due to injury or a joint or soft tissue problem.

"To rule in or out other diseases, your veterinarian can perform bloodwork, skin biopsies/cultures, lameness exams, and radiographs," Davis adds.

Treatment

Treatment is usually pretty straightforward: Get the horse out and give him a little mild exercise such as

hand-walking or longeing. "With a younger horse, the swelling should go down pretty fast, usually within 30 to 60 minutes of activity," says Allday. "But with an older horse, the lymphatics don't work quite as well and the amount of edema is greater, so it takes a little more time to reduce the swelling, sometimes hours."

You can hasten the process by hosing the legs with cold water for 20-30 minutes, Allday suggests.

If the swelling doesn't improve or lasts more than a few days, take further action. Allday recommends applying a medicated poultice containing menthol and Epsom salts (magnesium sulfate). "This has a bit of an anti-inflammatory effect," he says, "The menthol increases circulation while the Epsom salts pull the fluids out through the skin (via a physical osmotic effect). It's a very efficient remedy."

He discourages using a mud-based poultice: "Most are extremely contaminated, and if you apply it over a cut or scrape overnight, it could very well cook bacteria in there and exacerbate the problem."

Nor does Allday recommend sweats as an initial treatment. "Sweats can drive heat into a limb that probably already has some heat in there, and increase soreness," he says. "However, after the swelling disappears and the limb is tight for a couple of days, you can do a horse up in a sweat. This will help to further tighten the limb."

If, despite these measures, static congestion persists for several days, your veterinarian might recommend medications such as acepromazine, corticosteroids, or diuretics, Allday says.

Prevention Pays

Mild exercise alone to bring down the swelling is usually successful for the majority of cases. However, Davis cautions, "true stocking up usually persists throughout the horse's life and may gradually get worse as the horse ages, although it should not affect his performance or quality of life."

Rather than deal with the problem after it occurs, a better approach is to avoid or reduce the risk of stocking up through management changes.

The single best thing you can do is turn the horse out more frequently, as activity improves circulation. "Providing exercise in between the days you ride or work your horse would help a great deal," says Allday. "Even just some turnout so the horse can move around will help."

If you can't increase your horse's activity through the week, placing supportive wraps on your horse's lower limbs while stalled could solve the problem, Davis states. "Regular trailer (shipping) wraps are fine, as long as they have adequate padding underneath. The idea behind this is to provide pressure, which prevents the fluid from pooling in the lower limbs. Horses should only wear these wraps while stalled, and they should definitely have time during the day without the wraps. A good protocol would be on 12 hours, off 12 hours."

Allday says horses prone to stocking up might also do better with fewer carbohydrates, more fat, and more roughage (beet pulp and/or grass hay) in their diets, and less pellets, oats, or alfalfa. This should help keep a horse's weight down, improve his intestinal motility, and provide adequate nutrients with a lower volume of concentrates.

He also suggests applying astringents such as rubbing alcohol, witch hazel, or leg braces after you have ridden to increase local circulation and reduce the odds of stocking up.

"Before you put the horse up, give your horse's legs a good rubdown with astringent--something not many people do anymore," says Allday.

Take-Home Message

Stocking up is not a serious problem, but it illustrates your horse's need for physical activity isn't being met. Healthy management changes to avoid this problem could provide other wellness benefits, too.

NOT SURE WHAT TO DO?

Is your horse stocking up or is there some other problem going on? Sometimes it's hard to tell.

"It's important to differentiate between normal stocking up and limb swelling due to a disease process," warns Jennifer L. Davis, DVM, PhD, Dipl. ACVIM, Dipl. ACVCP, clinical assistant professor of equine medicine and clinical pharmacology at North Carolina State University. "Noting a horse's attitude, appetite, and temperature, as well as monitoring the degree of swelling, are key points for differentiation."

Steven Allday, DVM, a racehorse veterinarian in Central Kentucky, advises, "If there is a little edema (fluid swelling), your horse doesn't look terribly uncomfortable, and is just a little stiff, get him out and give him some minimal walking." If it's simple stocking up, your horse should free up fairly quickly and the edema should subside within a couple of hours.

However, if your horse's limbs swell up repeatedly over several days; if he exhibits a protected gait, transfers his weight from front to back feet or vice versa, and seems seriously lame; or if he displays other abnormal clinical signs such as fever, limbs that are hot to the touch, lethargy, inappetence, etc., consult with your veterinarian. "Your horse could have a serious medical condition," Allday warns. --

Marcia King

WHEN IT'S NOT STOCKING UP

There are several disorders and diseases that can cause swollen legs, some of which can be performance-ending or life-threatening if not treated in a timely, appropriate fashion. "Some disorders cause rapidly progressive swelling that can extend up the entire limb," states Jennifer L. Davis, DVM, PhD, Dipl. ACVIM, ACVCP, clinical assistant professor of equine medicine and clinical pharmacology at North Carolina State University. "If the swelling in the lower limbs is caused by a disease process, the horse will usually be off feed, depressed, exhibit signs of lameness, with or without a fever, along with specific clinical signs related to the particular disease process.

Davis identifies several disorders that can involve lower limb edema (fluid swelling):

Equine viral arteritis (EVA) is a respiratory virus that can cause abortions and respiratory difficulties. Although horses can be asymptomatic, in acute states they present with swelling in the body and limbs, fever, nasal discharge, inappetence, skin rash, and muscle soreness. There are no specific treatments for EVA, although rest and antibiotics might be prescribed for secondary infection. A vaccine is available.

Rickettsial disease This refers to a variety of bacterial infections, including Potomac horse fever (PHF) and equine granulocytic ehrlichiosis (EGE), that are transmitted by fleas, ticks, mites, or lice. Besides edema, signs of PHF range from inappetence and depression to high fever and diarrhea. Complications include laminitis and colic. It can be life-threatening if untreated. EGE-affected horses have edema, fever, depression, inappetence, incoordination, lethargy, and jaundice; mortality is low, but fatalities sometimes occur secondarily to bacterial infection or traumatic injury. Both diseases should respond to appropriate antibiotic treatment. Tetracyclines are the treatment of choice. You can vaccinate against PHF, but not EGE.

Purpura hemorrhagica This problem is secondary to streptococcal infections and is an acute, serious immune-mediated disease characterized by hot, sensitive areas of edema in the head and trunk as well as the limbs, widespread hemorrhaging in the skin, depression, and reluctance to move. It is often associated with strangles. Treatment consists of a regimen of broad-spectrum antibiotics, anti-inflammatories, leg wraps, walking exercise, diuretics, and hosing swollen areas. "Penicillins or cephalosporins are the antibiotics of choice," Davis states. "Steroids are used as the anti-inflammatory medication (since it is an immune-mediated disease). Appropriate isolation protocols of the horse and the farm should be instituted." Vaccination can reduce strangles risk.

Cellulitis This is an infection of the skin and subcutaneous tissues usually caused by skin infections (scratches) or trauma. "Skin infections usually result in a clear or cloudy exudate oozing from the skin surface," states Davis. "Treat (these) with systemic antibiotic therapy."

Hypoproteinemia This refers to low protein blood levels, which are often caused by protein loss through the intestinal, urinary, or respiratory tracts, or by an other disease process, explains Davis. "Diarrhea and colic are often present," she says. "Treat by correcting the underlying disease process and replacing the horse's plasma proteins" with plasma transfusion or other fluid that replaces the colloid function of the normal plasma proteins.

Hoof abscesses These are usually present with swelling in just one limb. Hoof abscesses can cause severe lameness, and most need to be opened to allow drainage.

Trauma This can cause swelling and is often accompanied by other signs (punctures, scrapes, scratches, lameness, etc). Depending upon the nature of the wound, treatment could involve anti-inflammatories, antibiotics, and/or rest.

There are also other lameness, neurologic, orthopedic, or systemic disorders that can involve swollen limbs. Get an accurate veterinary diagnosis and provide timely, appropriate treatment for the best outcome. --*Marcia King*

Readers are cautioned to seek the advice of a qualified veterinarian before proceeding with any diagnosis, treatment, or therapy.



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