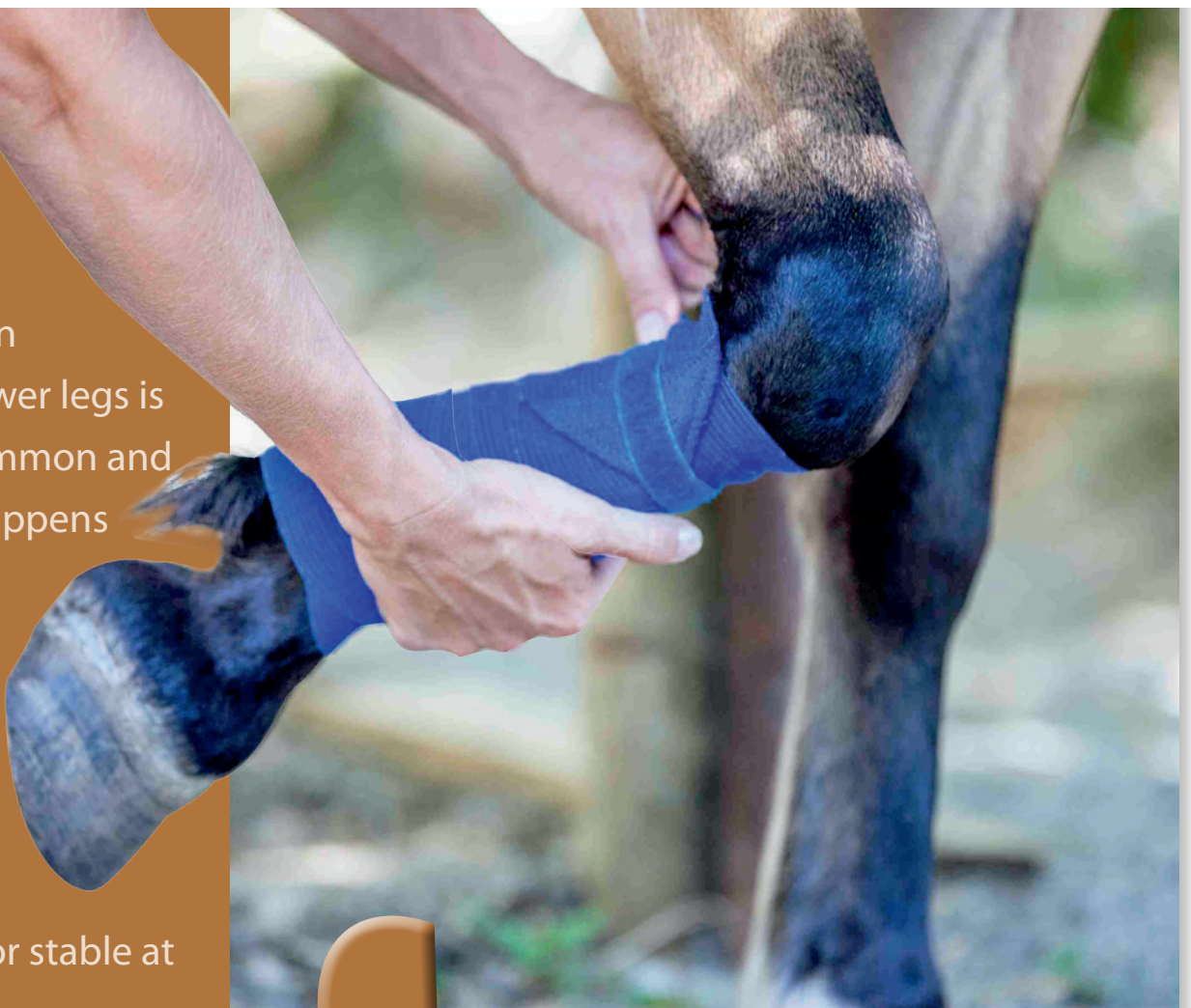


Swelling in horses' lower legs is pretty common and usually happens if horses move less than normal - like standing in a yard or stable at night.

However, not all swollen legs are so easily diagnosed.



SWOLLEN LEGS

Swelling in horses' lower legs is pretty common and usually happens if horses move less than normal - like standing in a yard or stable at night.

This is especially evident in situations where your horse is turned out all day and locked up at night. The swellings are usually about the same size in all affected legs and may extend the length of the cannon bone. These are cool, nonpainful and the horse is absolutely fine otherwise.

REASONS FOR 'THICK' LEGS

There can be several very different reasons a horse has 'thick' legs as many different conditions result in swelling of one or more legs in horses. Trauma is a common cause of damaged blood vessels and swelling in a single lower limb. Rarely, swelling of multiple limbs can occur because of trauma to multiple limbs. Trauma and inflammation can occur high on a limb or even on the body and the resulting fluid can drain by gravity to the lowest area of the body - the lower limbs.

Swelling in one leg: Swelling is one of the most basic symptoms of inflammation, along with heat and pain. Common causes of swelling in one leg include injuries and infections. Sudden filling in a single leg could be a symptom of cellulitis, an allergy or a venomous bite. Allergic reactions can affect all four legs, so

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WHAT IS STOCKING-UP?

'Stocking-up' is where fluid accumulates in two or all four lower legs overnight and goes away once your horse starts moving .

It is an accumulation of fluids in the tissues of the legs. Ordinarily the fluid is slowly removed by the lymphatic system. 'Lymph' is the name for the colourless fluid containing white blood cells, which bathes the tissues and drains through the lymphatic system into the bloodstream. Stocking-up occurs when either the production of lymph is greater than normal, or the clearance of lymph by the lymphatic system is slower than normal.

Lymphatic vessels run close to blood vessels and move fluid up the legs against gravity. Movement of lymph fluid and its return to the blood relies upon small valves and contractions in the lymph vessels, aided by compression and massage by muscles, movement, posture, respiration and blood vessel pulsation. When this delicate system fails we get an accumulation of fluid between cells, called 'oedema'. This typically presents as swollen, stocking-up or filling in legs.

HOW TO DETERMINE IF IT IS STOCKING-UP?

To determine if the swelling is 'stocking up,' apply pressure with your fingers over a swollen area to produce pits in the skin (hence the term 'pitting oedema'). It shouldn't cause pain and the pits will slowly refill over 30 to 60 seconds. If inactivity is the cause, the filling should resolve



completely after 10-15 minutes of gentle exercise. If movement isn't possible or the swelling is causing discomfort, cold-hosing, bandaging and massage can all help ease the swelling – especially in horses that always seem to 'fill' when confined. Compression or stable bandages can help minimise fluid accumulation. But only go for that solution if you're sure there isn't another cause for your horse's swollen leg(s) - otherwise you're fighting a symptom.

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Swollen Legs continued...

if an otherwise healthy horse stocks-up when it's not confined, look for possible causes, including plants.

Musculo-skeletal injuries:

By identifying signs of inflammation early, steps can be taken to reduce it and potentially reduce the severity. Careful observation of the horse at work followed by thorough palpation of all limbs immediately after exercise and after cooling down is vital for early detection of swelling. Palpation of the limbs can reveal if there is thickening in a joint or tendon. By identifying signs of inflammation early, steps can be taken to reduce it and potentially reduce the severity.



Lower leg swelling usually happens when a horse moves less than normal, such as when standing in a stable overnight.

Tendons

are the flat extensions of muscles that anchor the muscles to the bone. Mild damage to a tendon usually results in slight enlargement and inflammation, which we commonly feel as heat and swelling, but not always lameness. The long tendons of the legs, which are enclosed in a sheath or sleeve of fluid, are at risk of damage during exercise or from injury. They can be over-stretched during faster work, jumping or working on uneven ground. They are also vulnerable to knocks, bumps and sharp trauma. If the tendon sheath is also damaged, it will be distended and seen as more extensive filling in the leg.



Left: The presence of wind puffs indicates there has been strain as it is fluid in the tendon sheath.

Ligaments can also become strained or damaged by trauma, including abnormal or excessive forces placed on a joint when turning at speed. Lameness may be mild to severe and as with tendon injuries there is often heat, pain and swelling in the region of injury. The success of treatment pivots on an early, veterinary diagnosis.

Soft swellings: Even though they sound like a lovely spring cloud, windpuffs can be found on the back of your horse's legs. Although not usually associated with lameness, these soft, fluid-filled, symmetrical pouches on the sides and rear of the fetlock joint can look

alarming. Windpuffs can present with no soreness, lameness or as an indicator of a more serious condition due to recent injury in which the horse is notably lame. Stocking-up can look a little like a windpuff, but a windpuff is fluid in the tendon sheath and doesn't disappear.

Joint swelling can also look like stocking-up or windpuffs, but the swelling is more to the front. Windpuffs are generally not a problem unless there is heat, pain or lameness due to inflammation or damage to the tendon sheath. However, if a windpuff pops up suddenly or there are changes in size or extension of the filling – even without lameness – veterinary investigation is recommended. The presence of windpuffs indicates there has been excessive strain and they should be monitored for any changes, which can be a symptom of developing joint, tendon or ligament pathology.

Swelling in multiple legs: There are many other reasons for swelling of multiple lower limbs. If there is backup of the blood return from the legs (congestive heart failure), the limbs swell. If there is loss of albumin (blood protein) and the limbs swell. If vessels are injured (vasculitis from viral or allergies), the limbs swell. Diseases that cause these problems are associated with multiple leg swelling and the list of possible causes is very long.

Table 1.

LEG SWELLING OR OEDEMA	EXTENT OF SWELLING	CAUSE
ACUTE: present for 1 - 3 days	Localised	trauma/injury infection chemical irritants burns photosensitisation bites parasites
	Generalised	immobility vasculitis heart failure
CHRONIC: present longer than 3 days	Localised	infections blood vessel obstruction lymph vessel obstruction (lymphangitis) chemical agents photosensitivity
	Generalised	low blood protein increased blood pressure skin disease

The swelling for a 'fat-leg' can extend to above the hock or knee.

Leg oedema can be triggered by a wide range of factors including chronic lung disease, purpura haemorrhagica (a complication of strangles), kidney disease, heart failure, liver disease, thyroid issues, damaged blood vessels, nerves or lymphatic vessels, medication, parasites, injuries, burns and bites. Although this enormous range of causes sounds alarming, in the otherwise healthy horse (and if two or all four legs swell at the same time), the most common cause is likely to be inactivity (Table 1).

Skin swellings: In wet environments the skin of horses is unavoidably and continuously exposed to moisture. Organisms normally found on the skin can invade the weakened barrier and establish an infection – fungi and mites can add to the party! Mild infections (pastern dermatitis, 'scratches', greasy heel or mud fever) can spread into the deeper layers and lead to cellulitis or lymphangitis.

Muddy conditions aren't always necessary - wounds or grazes can also allow the bacteria to penetrate and lots

If the swelling associated with pasture dermatitis does not go down in a couple of days then it should be looked at by your vet.



of work in certain sandy arenas and schools can be quite traumatic to the skin. Pastures containing rough plants or spiky weeds can cause trauma to the skin and excessive leg washing weakens skin. Some beddings can act as an irritant both physically (straw) or chemically (high ammonia from urine in deep litter) and incorrectly placed boots and bandages also cause damage to the vital skin barrier.

Pastern dermatitis is more common on horses with white legs with pink skin. In severe cases the whole lower leg can swell up and become very painful and hot. All participants (bacteria, fungi, mites) must be treated and are much easier to treat if recognised early! Check the lower legs carefully

Continued



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Swollen Legs continued...

for any signs of the condition, as early treatment will hopefully deliver a speedier resolution. Leaving treatment too late can mean weeks of work in getting the upper hand. If the condition is not responding to treatment within a few days, or it continues to spread or is painful to the horse, then contact your vet. Calling a vet in more serious cases not only gives you the best chance of getting on top of the problem, but they come armed with sedatives.

Cellulitis and lymphangitis:

Leg swelling caused by cellulitis or lymphangitis can follow a break in the skin's protective barrier that allows bacteria to enter the body and infect deeper layers. If the infection progresses to involve the lymphatic system, it becomes lymphangitis. These are both very serious and potentially life-threatening diseases that need to be addressed as soon as possible.

Although commonly due to cuts and puncture wounds, cellulitis or lymphangitis can also follow spider or insect bites.

Some cases are linked to specific diseases eg purpura haemorrhagica which can be a complication of strangles. But most of the time, the actual cause of a specific case of lymphangitis is difficult to determine. This is because by the time we recognise there's a problem, the leg has already swollen two to three times its normal size, which makes finding wounds virtually impossible.

Lymphangitis presents with varying amounts of swelling, from foot to fetlock



Legs can be wrapped to help reduce swelling when a horse is confined or stabled overnight and, in some cases, hosing or a clay poultice may be beneficial.

level or as a 'fat-leg' extending to far above the hock or knee. It is acutely painful and horses may be subdued, distressed, off their food, have colic signs, sweat and a fever – other horses may appear fine. In very severe cases or those left untreated, the pressure build-up within the lymphatic vessels can lead to leakage of serum (straw-brown coloured fluid) from the skin, which appears as crusting and oozing areas (ulcerative lymphangitis). Treatment of lymphangitis is always necessary and must be started quickly and continued until the condition resolves.

Allergic reactions to either sunlight or something in the environment such as buttercups, other flowers/plants or bedding cause reddening (inflammation) of the skin around the pastern above the heel bulbs. More common on white legs allergies can cause oozing of serum and scabs, which are often very painful to touch. Strong sunlight on white legs can

cause sun burn particularly on certain horses pre-disposed to photosensitization. red clover in pastures (???). Other known triggers are St John's Wort, perennial ryegrass and buck wheat. Photosensitivity can also be a sign of liver disease and is an issue best discussed with your vet.

One Thick Leg?

What should you do if your horse only has one thick leg? Or one leg is thicker than the other? Or your horse is lame or not their usual self? Or it exceeds what you consider is 'normal' stocking-up?

Firstly, investigate to ensure there is no underlying reason why the legs are filling - look carefully up and down the legs, feel for wounds, irritated skin or other abnormalities.

Then check their temperature, heart rate, the feet (digital pulse and heat) and lameness at the walk. If the filling seems serious to you or worsens, does not go away after exercise, is more in one limb than another, or there is lameness or any other problems, call your vet to discuss your findings and concerns.

If a foal or weanling has any leg swelling, veterinary attention is always urgent as the underlying causes are different and more serious than stocking-up in adult horses.

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