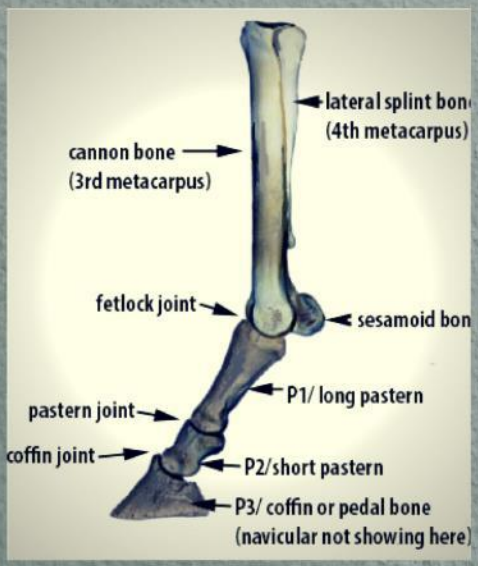
PDF "HOW TO" SERIES

EQUINE BODYWORK TO SUPPORT THE DISTAL LIMB

THE EQUINOLOGY APPROACH TO EQUINE BODY WORK



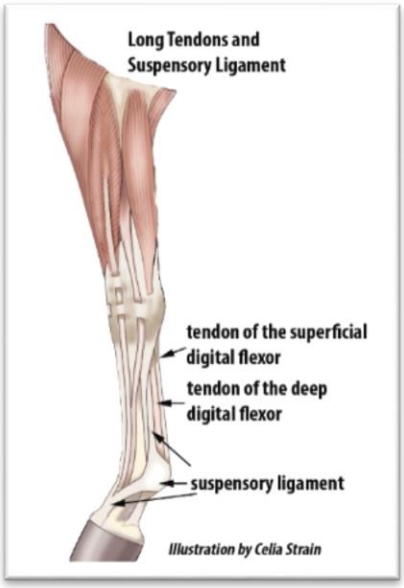
DEBRANNE PATTILLO, MEEBW

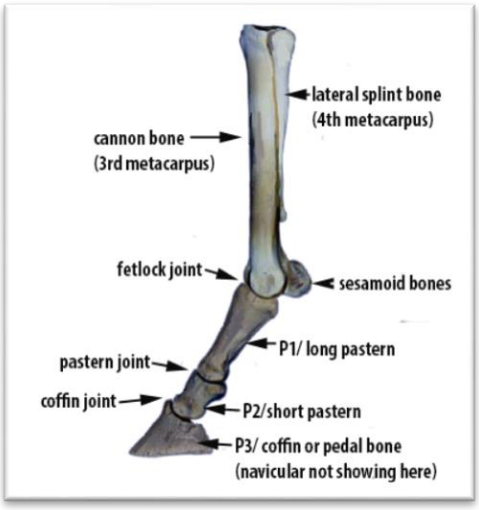
Help! What can I do while my horse's lower front limb is healing?

By Debranne Pattillo, Equinology INC® CEO, MEEBW®

You've heard the news. You and your horse are sidelined while an injury to the lower front limb heals. It is not surprising to hear that 50% of lameness cases arise in the front limb[1]. Injuries are not just limited to high-level sport horses where the "chronic repetitive trauma"[2] are a component of the equation. Any horse can present numerous sports related injuries as well as issues resulting from conformation, hoof care, work load, footing, nutrition, concussive force, fatigue, conditioning, tack fit, training aids, rider error, and management. While you'll want to address the current leg problem, you will also want to review your training, conditioning and care approach to see if there is something you can do to avoid a future injury. This is not always easy, especially if conformation related (how the horse is put together) or it might be difficult to identify, however, other times, the cause can be acknowledged and remedied.

There are numerous conditions that affect the distal limb.[3] It is important that your attending veterinarian reaches an accurate diagnosis. As an owner, rider or trainer you'll also need to address compensatory and secondary issues that accompany the problem as a result of the injury or condition. You should always first clear any type of bodywork with your veterinarian to make sure it is appropriate for your horse. Explain, and if possible, show or discuss your intentions with your veterinarian. The techniques included in this article are helpful for the long digital tendons (the outermost two cables on the back of the cannon bone), the suspensory ligament and the structures of joints, bones, and ligaments of P1, P2, P3. Some of the techniques were addressed in previous articles, and these will be shared next before moving on to other moves.





Bones and Joints of the Distal Limb

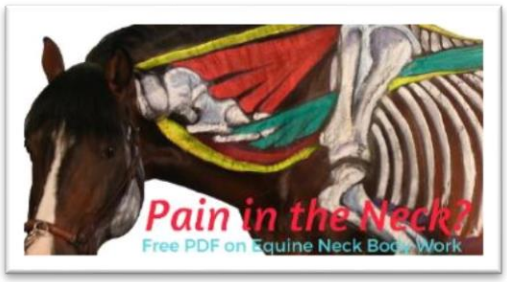
Have you ever noticed that your vet picks up the affected front limb and squeezes the neck bones? There is a reason for this. When there is a problem in the distal limb (furthest away from the body), the horse braces the neck muscles as he is loading the limb and these are often sensitive. Do remember that a neck issue whether bone or soft tissues can also lead to distal limb problems which is why it is important to have a vet work up to identify the primary issue. During the vet exam, the mobility and range of motion are assessed with a full palpation of all structures.

[1] Equine lameness due to disorders of the distal limb (Proceedings) source-image, Oct 01, 2008 By William Rhoades, DVM, DACVS, DABVP CVC IN SAN DIEGO PROCEEDINGS: http://veterinarycalendar.dvm360.com/equine-lameness-due-disorders-distal-limb-proceedings

[2] Distal Limb Lameness in the Sport Horse: A Clinical Approach to Diagnosis Richard D. Mitchell, DVM, MRCVS: https://aaep.org/sites/default/files/issues/SportMitchell.pdf

[3] Leg Problems Most Prevalent in Horses: http://horsehints.org/LegAilments.htm

Since these two conditions go hand in hand, you should be addressing the muscles of the neck with bodywork. In a previous "how to" installment, these were addressed in the paper: *Equine Bodywork for the Neck*. You can download this article by copying and pasting this link: https://ronamead.clickfunnels.com/owner-courses3i7llzbm. In this particular article, it explains the mechanics of the techniques along with safety, contraindications to bodywork and palpating the surface anatomy. If this type of work is new to you, please read this article first.



Horses tend to be sensitive through the wither muscles, so this is another area that is addressed with distal limb conditions.

WITHER TECHNIQUES

First, you need to identify the surface anatomy that lies in the area we plan to address. Find the spine of the scapula (shoulder blade) and the cartilage of the scapula.

Palpating the scapular spine

Scapular spine: Lay four fingers of both hands perpendicular to where you imagine the scapular spine to be. If you rest your hands on the shoulder, this position will allow more control with less effort. Run your finger pads across horizontally as if you were running over a speed bump. Make sure you are using a light touch. Some breeds tend to have so much muscling that the spinatus muscles project beyond the spine lying deep between the muscles make it appear as a long dimple or valley. Other lighter breeds or those with less shoulder muscling appear to have a scapular spine that sticks out.

Scapular cartilage: Place your fingers on the higher portion of the withers, ease down with a very light pressure until you feel a change of texture; your finger will glide across the cartilage. Make sure you are moving perpendicular to the edge so you run over it. This dorsal edge is much easier to see if you lower the head and neck.

Finding the caudal border of the cartilage

Now for the moves!

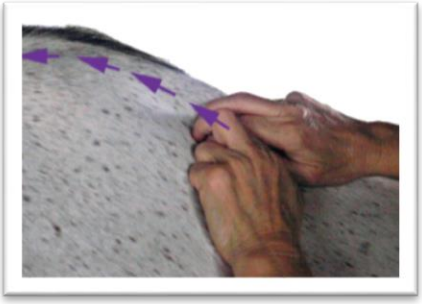
Trapezius Glide: You can use your palms or your arms for the neck portion of the trapezius (the green muscle in this section). Set your palms and allow them to rest in place for at least 60 seconds. Think about sinking or melting into the tissue while you wait; don't push. The horse will tell you how much pressure or weight if you take your time with this important aspect of the move. After waiting, begin a very slow glide with your palms upward towards the middle of the mane. Let your finger pads just on the horse during the move to keep tension out of your hands. It can take

anywhere from 30 seconds to over 3 minutes for one pass. Repeat.

Now, face the hind end and repeat on the portion of the trapezius portion lying behind the spine of the shoulder blade

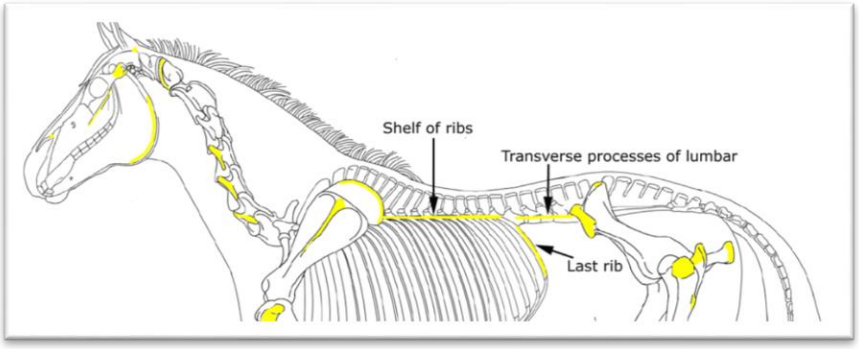
Prep then Press: Let the horse know where you are going to work first by stroking with your palm over the top of the scapula cartilage. Begin lightly pressing in with your palm making sure you are above the scapular cartilage. Again, it is very important that your hand is relaxed. Bend your fingers so the pads rest on the other side (they are not part of the move though!). Move forward and repeat until you cover the entire area. Do at least three full passes.

Fingertip circles: Use your fingertips supported against each other to soften this area further. Begin lightly (about the pressure you prefer on your lower ridge of the rim of your eye socket) and allow the stroke to build with at least three passes.

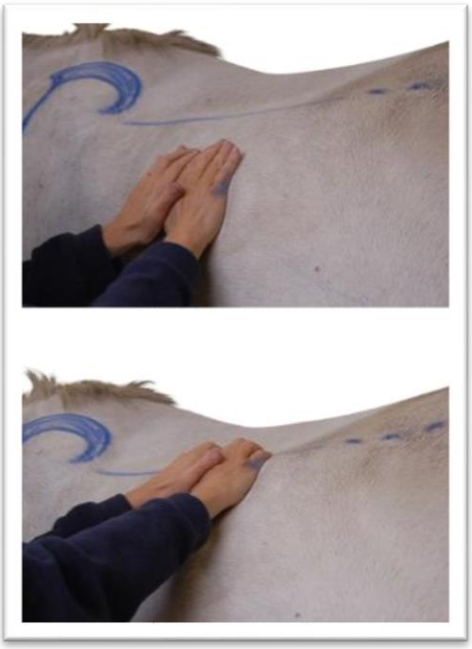


Wither Lift:
Lengthen It! Place one hand on the neck and the other in the girth area before you begin. Rest for a few moments. This way you know where the neck is and can push him away if you have a nibbler. Once you determine the horse is okay with your hand in this area, rest both hands starting with your fingertips at the midline. **There is no secret spot for lifting!** However, it does take a relaxed hand (getting tired of hearing that yet?). The trick is to rest your palms and fingers in the area. Bend your knuckles but maintain the finger pad pressure. Lock your elbows into the sides of your body so you know have "dinosaur arms" and move your hips to move your arms. Some horses already have really good posture, so you won't see much of a lift at all. Other horses are quite sensitive through the withers (or girthy), so you must move slowly and more importantly, never ask for more than your horse can give. In some cases, you will be content to just rest your hands here without any motion. If the horse accepts your hands, alternate raking upward with the right hand then the left hand. Stop moving your hands with your fingers resting near the midline for a lift. Hold up to 30 seconds.

Working the Muscles Connecting the Forelimb to the Trunk



When you massaged the neck and wither muscles, you included the muscles that also connect the neck to the forelimb (serratus ventralis cervicis, rhomboideus cervicis and thoracis as well as the trapezius cervicis and thoracis). Now we want to address the lateral back muscle (latissimus dorsi) and the serrated ventral trunk muscle (serratus ventralis thoracis). You'll need to locate more surface anatomy: the shelf of the ribs, the last rib and the transverse processes of the lumbar.



The shelf of the ribs: You will be able to find this shelf, even on horses that fill out their skin well, by starting below the shelf about mid barrel (trunk). Run upwards (dorsally) with your fingertips and they will hook the shelf. This is the place on the rib where they curve inward (medial) before continuing you join up with the spine.

Last rib: Again, this is easy to find on all body types. However, please think about your safety. By standing closer to the shoulder, you can see if the horse objects and witness the start of a kick. You'll start in front of what lay people refer to as the "point of hip" (coxal tuberosity) where the hair swirls in the flank area. While standing closer to the shoulder, reach with your outside hand and rest your fingertips midway on the "flank swirl." Now, draw your fingers towards yourself (cranially) and you will bump up against the last rib.

Transverse processes of the lumbar: This is an area that is more of a suggestion. It is difficult to feel on most horses and best to find it by falling off the edge of the processes. The transverse processes run about the same

level as the shelf of the ribs. Check for them beyond the last rib at the level of the shelf.

Working the Muscles:
There is a large bulge under the shelf of ribs right behind the shoulder. This muscle is the serratus ventralis thoracis (the yellow muscle on the painted horse in front of the ribs) which is covered by the latissimus dorsi muscles (the blue muscle on the painted horse with the lines). This next move will address both muscles at the same time if you move nice and slow.

These are the lines numbered 1-4 are the lines we are going to follow to address both muscles.

Gravity slides:

Use both your palms and cup below the bulk of the ***serratus ventralis thoracis.*** Make sure those finger pads are resting on the horse to take any tension out of your hands. Allow the horse lean and settle into your palms. Count off 20 seconds staying in this same place. Now slowly glide upward to the pocket of the wither. It should take you at least 30 seconds to glide up each line of the four lines. If your horse is enjoying the move, you won't have to count 20 seconds at the beginning of each run. However, if your horse is uncertain about the move, keep the 20-second hold for each run. You'll be addressing the ***trapezius thoracis*** again during this run.

Repeat starting at the same beginning place at the bottom but end just caudal (behind) to the last move.

The Pectoral Muscles
These muscles in between the front limbs and the trunk can be sensitive with any lower limb issues. In a previous "how to" article we discussed working the pectoral muscles. To access this article, please visit: Targeting the Pectoral Muscles: https://ronamead.clickfunnels.com/optin12664760.

Working the Muscles of the Digital and Carpal Flexors:

You are probably wondering when we are going to put our hands on the tendon or ligament structures that were injured. It is hard to make significant differences utilizing manual massage techniques to address tendons and ligaments. However, tendons have muscle bellies, right? The majority of the motion occurs because of the shortening of the muscle fibers and connective tissues within the belly. If muscle fibers cannot secure their own release (they stay contracted or shortened or "on"), other soft tissues are overworking, and stress is placed on the tendons. When we have too many of these fibers shortened, something else has to give. Muscles have a great blood supply (they are vascular), and we can address them with bodywork. Better blood supply typically means better healing.

Face towards the hindend and reach between the front legs with the inside hand, so your palm rests above the carpus (knee). Reach around the outside of the leg and rest the palm of this hand on the other, chuck (lift) upward towards the elbow around ten times.

Face towards the hind end and pick up the leg as if you were cleaning the hoof. Support the limb with your outside hand resting just below the fetlock. Avoid bending the fetlock, pastern and coffin joints. This is why we are not holding onto the tip of the hoof. Let the elbow of the same arm rest somewhere against your outside leg to support the limb. Make sure you have the carpus (knee) more than 90 degrees open, and you are not pulling the limb to the outside. If for some reason you cannot offload the limb you can perform this move with the limb loaded.

Reach in between the horse's front legs with your inside hand. We will start just above the carpus. This is a cross fiber move, and you will plow back on the inside of the limb towards the hindend with your palm continuing as far back as you can. Now reach to the outside of the limb with the same hand's fingertips and rake back. Continue walking this move up the limb. Once you reach the top, slide down and begin the move again. It will take you around 5 seconds for each pass. Repeat around six times.

Slow Lift and Stretch for the Distal Limb

This technique is an adaptation of myofascial release (MFR) for the limbs, with a special focus on the joints, ligaments, and tendons in the limb. There is a common misconception that MFR means "stretching" the tissue and is often described as stretching. Sorry, not the same thing.

So how does this modality work? The precise physiological mechanisms of MFR are still being researched. It is speculated that mechanoreceptors (sensory receptors that respond to mechanical pressure, sensation or distortion) in the skin play a role in this technique. Ruffini corpuscles, which are mechanoreceptors in the skin, are being researched scientifically.

Alice Sanvito writes*:*
"Why Ruffini corpuscles? Clinically, we observe that applying a slow, extended stretch to the skin can create desirable changes both locally and centrally, decreasing tension in the area where the hands are applied as well as creating an overall sense of relaxation. Ruffini corpuscles respond to lateral skin stretch that is, stretching the skin tangentially or along the same plane as the tissue below. They are slow adapting, meaning that they continue firing for as long as the stretch is sustained, unlike some mechanoreceptors which respond briefly to new stimulation and then stop responding if it continues… The nervous system is constantly monitoring its environment, responding to a complex array of input. It would be naive and simplistic to think that response to our touch could be reduced to one set of mechanoreceptors or to ignore all the other countless factors. However, when examining the kind of manual therapy, we have come to think of as "fascial," understanding the role of Ruffini corpuscles is a good place to start."
http://www.massage-stlouis.com/if-we-cannot-stretch-fascia-what-are-we-doing

While mechanoreceptors that respond to manual pressure are also found in fascia (which in itself is capable of minimal contraction), it is suggested that one cannot stretch fascia through sustained holds. An example is offered to consider that if this were the case, just sitting in your chair would constitute a myofascial release. Activating mechanoreceptors may reduce fascial tone, and although this may make them more pliable, this activation does not result in a maintained stretch.

Here's the move:
After adopting a crouched stance that allows you to brace your arms against your body, cup the leg with both hands with one resting in the front and one behind. Begin just above the hoof in the pastern area. The braced stance is used since upper body strength should not be relied on to sustain the hold.

Apply just enough weight, so you lengthen the tissue. Build up the pressure by lifting upwards to address the underlying tissue. Let your hands travel upwards slowly; if you gently rock side to side, this will help facilitate the glide. Be sure to keep the rocking minimal especially on an injured limb and avoid pressure on the joint. Be aware that the horse may initially interpret this as a request to lift the leg, but will shift his onto the limb when your horse understands what is involved.

Try to aim to sustain this move for upwards of 120 seconds and continue all the way to the carpal joint (knee).

Conclusion
You can utilize all of the moves or pick and choose what works best for your horse. While you wait for your horse's recovery, review your training and conditioning program. There are some resources to review in the footnotes of page one and others are listed below for your consideration:

Common Causes of Poor Performance in a Horse:
http://www.tufts.edu/vet/sports/performance.html
Biomechanics of the Dressage Seat:
http://www.dingosbreakfastclub.net/DingosBreakfastClub/BioMech/BioMechmusc.html

Osteopathy and the Treatment of Horses by Anthony Pusey, Julia Brooks, Annabel Jenks
True Collection:
http://www.sustainabledressage.net/collection/true_collection.php

Available online for purchase:
Activate Your Horse's Core: Unmounted Exercises for Dynamic Mobility, Strength & Balance by Drs. Narelle C. Stubbs and Hilary M. Clayton
Cavalletti: Schooling of Horse and Rider over Ground Rails by Reiner Klimke
Improve Your Horse's Well Being by Linda Tellington Jones
Equicore Concepts: THE Equiband™ SYSTEM: www.equicoreconcepts.com

Did you enjoy this article?

Do you want to learn more? We have two courses coming up. First is the EQ75: Equine Massage and Bodywork for Owners and Trainer. This course is designed for those who would like to work on their own horses. The second is the EQ100: Equinology Equine Body Worker Certification Course which is formatted for those who would like to qualify to practice as a professional. Details are below.

EQ75: Equine Massage and Bodywork for Owners and Trainers: $595

Presented by author and course creator, Debranne Pattillo, MEEBW
https://equinology.com/equine-owners-and-horse-trainers/
This link also has other locations and dates worldwide
COURSE OUTLINE: Locating the surface anatomy, identifying the muscles addressed during the session, common areas of stress, encouraging communication and interaction during the session, differentiating between normal and pain responses, recognizing the differences between a release, response and reaction (highly misunderstood in this industry!), massage and bodywork techniques, stretching and lengthening techniques to support the bodywork, correct and effective body mechanics, improving your eye for gait and conformation assessment, contraindications to bodywork and above all safety for both the worker and the horse.

EQ100: Equinology® Equine Body Worker Certification Course: $2495

Presented by author and course creator, Debranne Pattillo, MEEBW
https://equinology.com/product/eq100-equinology-equine-body-worker-certification-course/
This link also has other locations and dates worldwide
COURSE OUTLINE: Application of a full session as well as targeting specific areas; Additional specialized Equinology techniques for session application; Superficial, middle and deep muscle location and isolation; Over 90 point locations; Veterinary vocabulary and terminology; Benefits of bodywork; Contraindications of bodywork; Bony landmark/surface anatomy identification; Stretches for the session; Work ethics; Documenting sessions; Conformation and gait analysis; Injury; Exercising the horse after a session; Marketing; Introduction to dental issues; Introduction to saddle fitting issues and Session assessment & observation forms included for business use.

More About Equinology

Equinology is not just in the education business, we are a state licensed school approved to operate by the BPPE (Bureau for Private Postsecondary Education). BPPE approval to operate means the institution is in compliance with the minimum state standards contained in the California Private Postsecondary Education Act. BPPE is the regulatory agency for private postsecondary schools. Equinology and Caninology is the only approved private postsecondary school in California which is strictly dedicated to Equine and Canine Bodywork with over 30 course listings. If looking into programs, make sure that you ask if they are BPPE approved! There are some BPPE approved massage and bodywork schools that offer one or two courses in equine and/or canine massage.

Equinology is also approved by the National Certification Board for Therapeutic Massage and Bodywork.

Equinology's courses are approved and recognized by the International Equine Body Workers Association (www.iebwa.com), UK's McTimoney Chiropractic Association and the Society of Osteopaths in Animal Practice.

Equinology's EEBW certification course is utilized as a module fulling the requirements for the Writtle University of Essex UK's three-year BSc (Hons) Equine Sports Therapy & Rehabilitation and the MSc Veterinary Physiotherapy Program.

Equinology is an approved veterinary continuing education provider for RACE. Select courses are registered and approved for this continuing education. RACE-approved continuing education is recognized by most AAVSB Member Boards; however, providers and participants should verify recognition with their board(s) and should be aware that some boards have limitations on the number of hours accepted in certain categories and/or restrictions of certain methods of delivery of continuing education. Equinology's and Caninology's courses and online classes are accepted by the American Council of Animal Naturopathy (ACAN) as electives and/or continuing education for certified animal and veterinary naturopaths.

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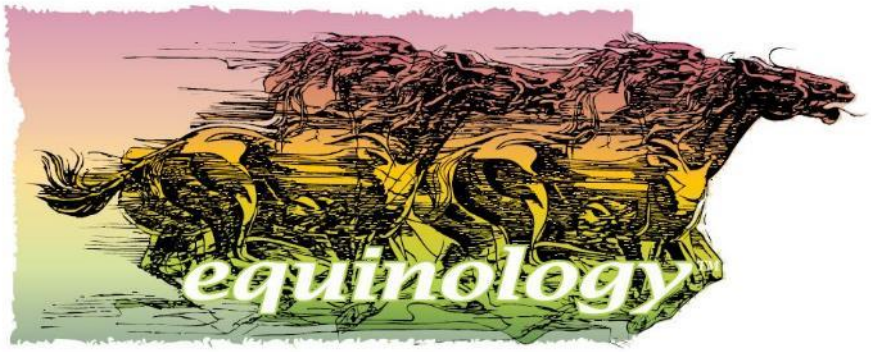

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