

CHANGING Muscle Memory

A therapist teaches ground exercises you can do to relieve your horse's tension.

By Jec A. Ballou and Jim Masterson

Photos by Joseph Stanski

As dressage has grown in popularity, horses of different breeds and disciplines have entered the sport. Many were not bred specifically for dressage, while others have conformational limitations or years of training in different disciplines to overcome, particularly many years of carrying themselves in a posture that doesn't resemble a dressage frame.

Asking a horse to round his topline and stretch onto the bit as we do in dressage can turn into a time-consuming and painstaking process

A SHOULDER RELEASE EXERCISE

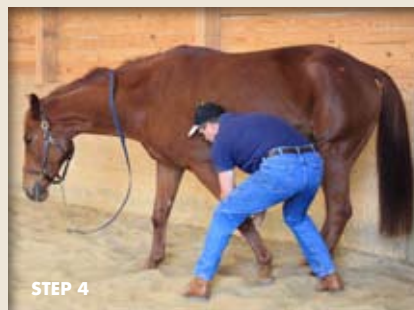
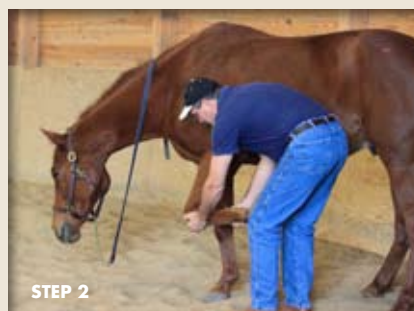
The purpose of this exercise is to release tension in the junction of the neck/shoulder/withers and to improve forelimb extension and mobility. This is not a muscle stretch; you are not pulling on the limb. You assist the horse to release the tension.

STEP 1: Position yourself facing forward at the horse's left shoulder.

STEP 2: Lift the foot, and place your right hand on the inside of the fetlock and your left hand under the horse's knee. Make sure your right hand is on or above the fetlock, not on the horse's hoof.

STEP 3: Hold the leg in this position, allowing the muscles of the shoulder to relax. When you feel the leg and shoulder relax or drop slightly, move on to the next step. The idea is for the horse to relax the leg in your hands until he sets it down and back. Do not pull on the leg.

TIP: Wiggling or rotating the foot and leg may help the horse to relax. If there is a lot of tension in the shoulder, he may have trouble relaxing in this position. If so, move on to the next step right away.



STEP 4: When the horse relaxes, lower his foot with your right hand, straighten his leg with your left hand and ask him to put his foot down and back until it is flat on the ground. Feel for his shoulder blade (scapula) to drop slightly as he does this. Do not ask him to step back too far. Step away, and allow the horse to release. He may stay in this position as long as he wants, or he may go back to a normal stance. Be sure to straighten his leg and allow him to put his foot down! If you hold his foot up and he can't put it down, he will pull back up or worse, fall down on his knee. This is why your right hand has to be above the pastern. Duplicate the exercise on the opposite side.

when a horse already has a “muscle memory” to stiffen or brace his neck in response to a request to carry his topline a certain way.

nerve centers in the horse’s poll act as a control panel for reflexes throughout his body. So when a horse, either through former training in other

addressed—through body therapy as well as systematic gymnastics—just as much as his training in dressage aids, the rider’s seat, etc.

Body therapists call this “neuromuscular re-education.” Without this, muscles will contract and release in a pattern that has become habitual through training or discomfort. Eventually, a horse’s nervous system will limit or restrict his soft tissues (muscle, ligament, tendon) from contracting

To change muscle memory, you must move a relaxed horse’s joints through a full range of motion.

Nerves in the horse’s neck and the “attitude” of the neck itself govern the entire body and its movement. These

disciplines or previous injuries, braces his neck, his entire body is locked. This physical pattern needs to be

A LATERAL CERVICAL FLEXION TECHNIQUE

This exercise releases tension in the poll and neck to improve the horse’s abilities to flex both laterally and vertically. As a general rule, when tension in the poll is released, the horse’s entire body relaxes. If the horse fidgets or fusses at any time during the process, do not take your hands off. Soften and release the pressure, then immediately ask again. Fidgeting is often a sign that the horse is about to release. When you soften, it gives the horse a chance to release.

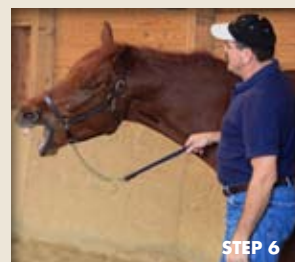
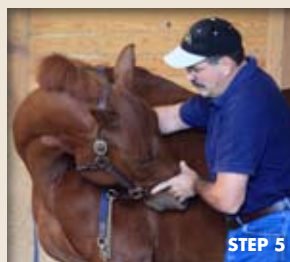
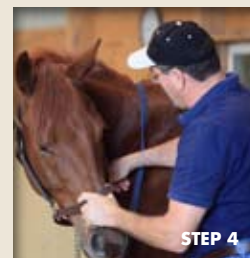
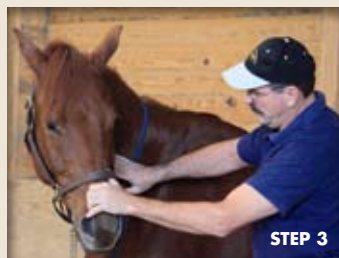
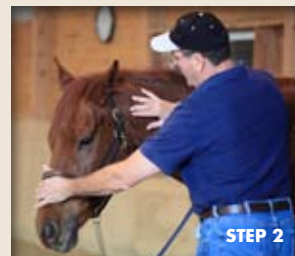
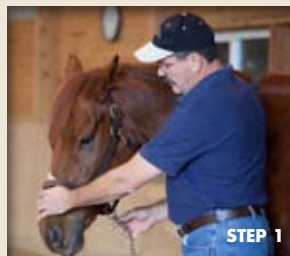
STEP 1: Stand beside your horse next to his left shoulder. Place your left hand gently on his nose or noseband.

STEP 2: Place your right hand or fingertips below and behind the atlas (four inches below and behind the ear).

STEP 3: Gently flex the nose toward you with your left hand, and apply gentle pressure toward the opposite ear with your right hand, asking (not forcing) the horse to relax the atlas. Feel for a release of tension in the atlas and poll. Signs include repeated blinking, yawning, licking and chewing, snorting, sneezing. Look for these as you work.

STEP 4: Slightly relax both hands, and then move your right hand two or three inches down the vertebrae of the neck, keeping your left hand on the nose. Gently flex his head toward you again with the left hand, pushing gently away with the right hand. Bring the nose a little farther toward the shoulder, stepping back as you go.

STEP 5: Relax both hands and repeat, bringing the horse’s nose farther back toward the shoulder each time, until you have brought the head all the way back to the shoulder, and your hand all the way down to the lower vertebrae of the neck. As the horse relaxes, gently rock the head and neck with both hands as you go.



STEP 6: Step back, and allow the horse to release. Duplicate this exercise on the opposite side.

or releasing in any manner outside this pattern.

Even after periods of rest and body therapy, such as massage, the nervous system retains this memory pattern, continuing—in the case of dressage—to restrict a muscle's range of motion. The nerves keep signaling the muscle to move the way it always has in its previous state. In order to change this, a rider must re-educate the horse's nervous system to recruit *all* the muscle fibers available, not just the ones it has memory of. One way to do this is to move the horse's joints through their full range of motion while the horse is in a *completely relaxed state*. This way, you release the restriction in the joint and accompanying muscles, plus show the nervous system that it can move through and beyond that point.


To improve your chances of success, perform all exercises and stretches intended to release trouble spots (rather than manipulate areas through massage) when the horse first comes from his stable prior to work. This way, his body is “cold” and not yet accessing his muscle memories. So, he is much less likely to guard his sore or restricted areas, and your chances of having him release are far greater.

We've included two of the most effective release techniques/exercises in this article (see “Shoulder Release” p. 54 and “Lateral Cervical Flexion” p. 55). They target the most common trouble spots, inhibiting performance in a horse that is learning dressage: a band of overly tight muscles in the throatlatch and soreness or misalignment in the horse's poll.

A horse dealing with this asymmetry or tension is not fully capable of stretching into the bit. Instead, he will likely do one of three options: brace against it, tuck behind it or fidget constantly. As this tension persists day to day, the ligaments and muscles connecting the ver-

tebrae shorten and lose flexibility. Rather than each vertebra being able to function independently, the three vertebrae of a horse's poll then "clump" together as an inflexible mass. From this point, it becomes more and more difficult for a dressage horse to use his topline.

Unmounted, tension-relieving maneuvers will help re-educate a horse's nervous system, while simultaneously changing his soft tissue for the better.

Immediately following these exercises, ride the horse and gently ease him into using his topline as you normally would. Then give him a long walk break as if to signal the end of your session. After a long walk and cooling out, go back and repeat what you're trying to achieve with the horse. This way, you capitalize on his fully relaxed state and begin to change his nervous system. 

JEC A. BALLOU authored *101 Dressage Exercises for Horse and Rider* and *Equine Fitness Manual*. A dressage rider and former national champion competitive trail rider, she has coached riders in dressage from multiple disciplines with an emphasis on equine fitness. Her students have been long-listed for the U.S. Olympic endurance team (jecballou.com).

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