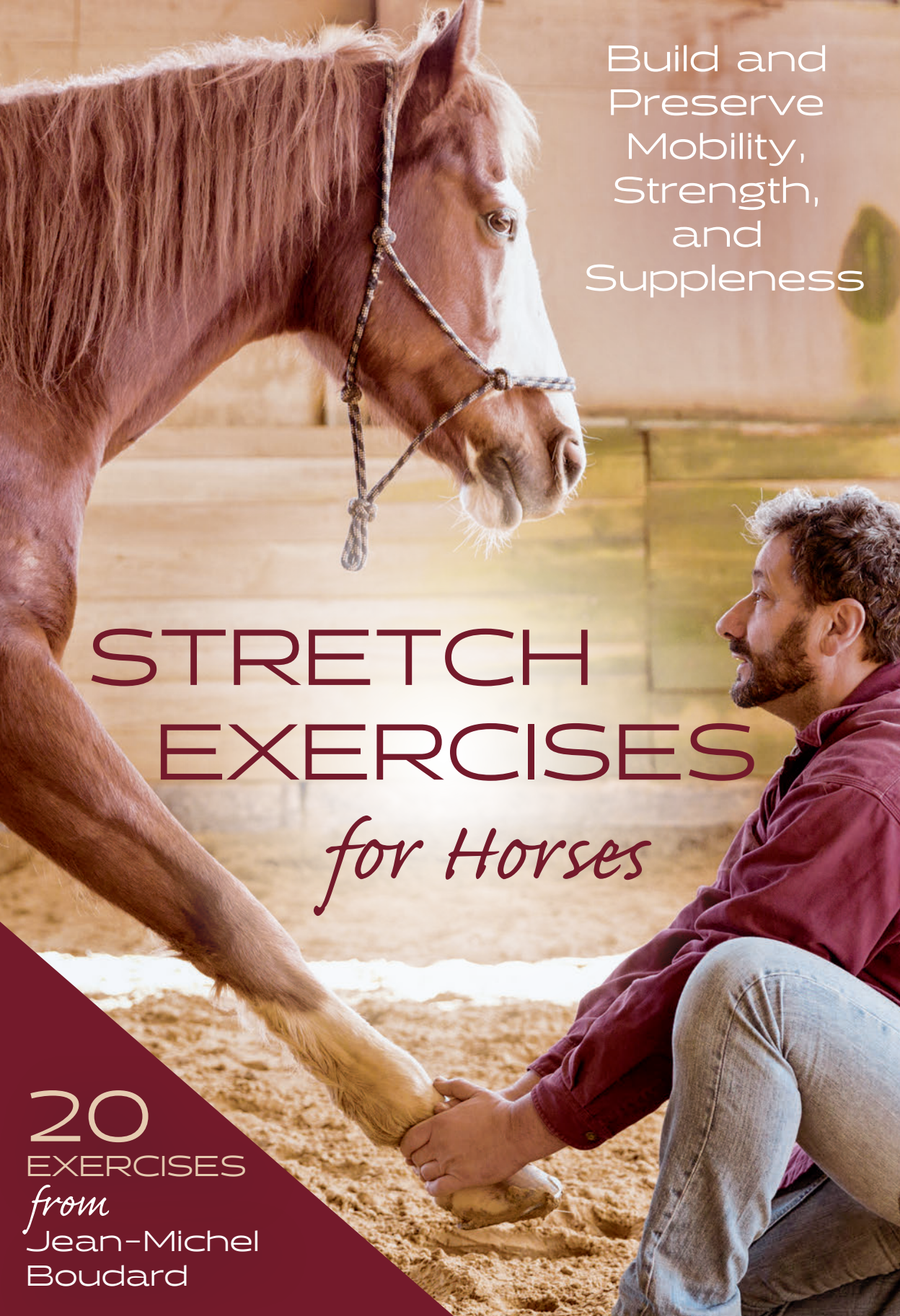
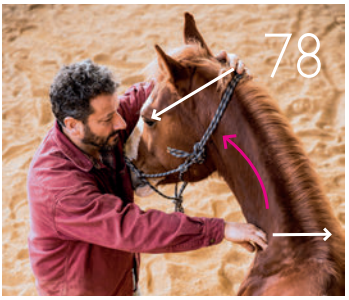
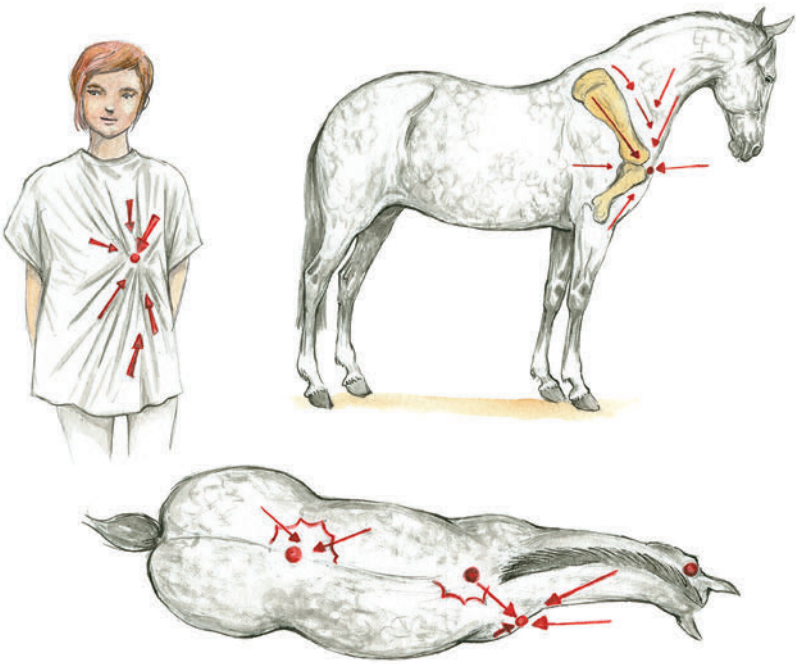

Build and Preserve Mobility, Strength, and Suppleness
STRETCH EXERCISES
for Horses
20 EXERCISES from Jean-Michel Boudard

CONTENTS



THE START OF A CHAIN OF COMPENSATIONS



By practicing stretching, you can detect the problem in its earliest stages, without letting its momentum get away from you; it's the best solution for the horse, the rider, and your budget. Studies have shown that regular maintenance of sound horses reduces the cost of more intensive care such as systemic anti-inflammatories to extinguish a full-blown crisis in a limited time, or injections for anything that is painful (with resulting delays to allow the drugs to pass through the horse's system in time for competition), or to handle any area that seems blocked. Everything is possible; everything has its symptoms and its consequences.

A daily stretching session allows you to spot problems in their early stages. It is preventive. It is then up to you to make the choice of how to solve the problems once they've been detected.

In the diagram above, we took the example of a horse with a problem in the front of his right shoulder. Whatever the origin, this restriction of mobility will initially hamper the area near the shoulder. Then the whole body will seek to adapt its posture to maintain balance during the work required of the horse, in order to absorb the discomfort of this restriction of shoulder mobility.

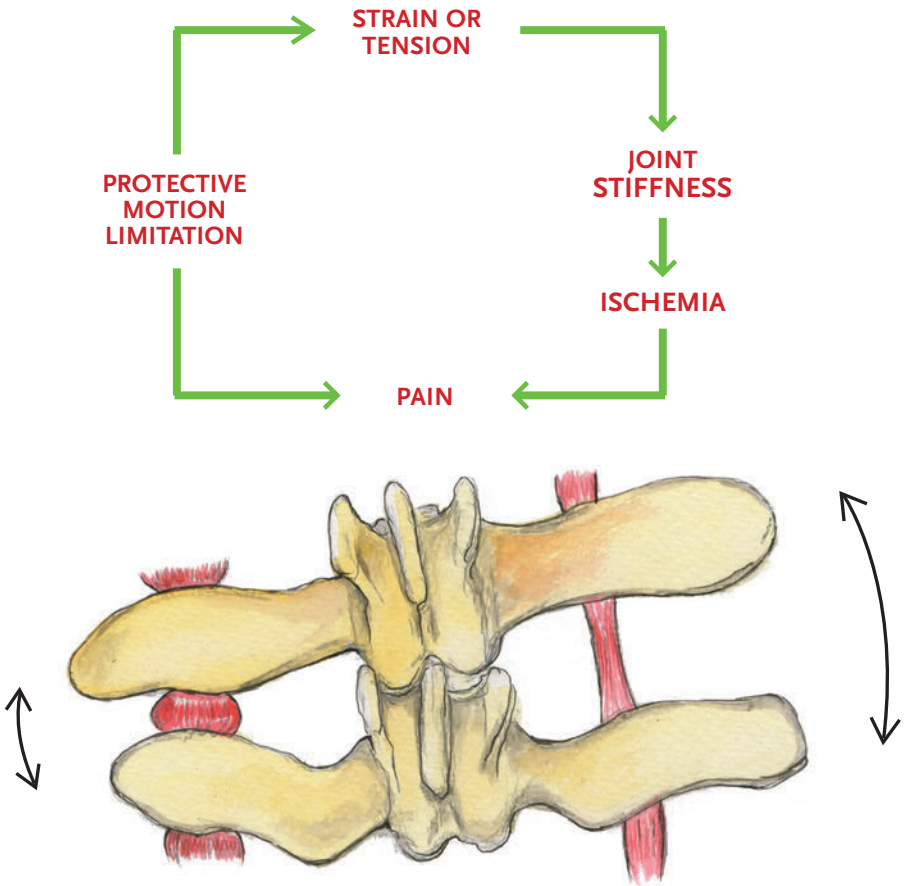
In this case, the problem in the front of the shoulder will hamper the extension of the right foreleg—and yet, once the horse is warmed up, discomfort will no longer be visible. Very quickly, with work, the compensations will progress deeper. We can

typically find painful tension in the lower right cervical muscles (right lateral tilt) and upper left cervical muscles (left lateral tilt, to keep the horse looking straight forward), along with tension in the left withers and lumbar spine.

Compensation could be compared to a rescue operation, useful in maintaining a minimum of function. Here we have a paradox: Mother Nature offers a rescue operation so as to ensure the minimum and prevent the body from running out of fuel while waiting for a solution to the initial problem. However, many riders struggle to deal with this minimum degree of function; they push, in the hope of achieving the previous non-minimum baseline of effective performance. This pressure overheats the system, so to speak.

The compensations become increasingly harmful through this over-straining, and the body is unable to reverse the process on its own.

Even the smallest area of knotted or strained tissue can disrupt the motor skills and body synchronization essential to a horse's performance.



Joint contracture and stiffness, trigger point

In osteopathic practice, a "contracture" can be defined as a physiological response in a muscle to numerous stimuli in the course of various pathological processes: pain, inflammation, tissue degeneration, poor posture. Considered as a defensive reaction, sometimes it can, over time, exceed its goal and become more troublesome than the initial pathology—a vicious circle from which you must escape as quickly as possible.

A contracture in a muscle chain causes a reduction in range of motion (stiffness), which reduces the mobility of the tissues around a joint. There is then a decrease in cellular exchange due to lack of vascularization. The tissues become loaded with toxins, and become painful. This pain generates additional protective contractures, and the painful cycle continues.

In the diagram on the previous page, we can see, on the left, a contracture affecting the two vertebrae laterally and compressing the left hind joint. The muscle on the right side is then constantly stretched, along with the joint capsule on the same side. Any movement becomes difficult to achieve, and gradually the two vertebrae are "locked" by contractures.

While a contracture is, at the beginning, a useful reaction, once enough time has passed with the contracture in place, it becomes an obstacle to a good recovery for both joint and muscles. Its treatment is therefore imperative. When it has been present for a long time, in addition to treating the original cause of the contracture, it will be necessary to treat the consequence of the contracture: muscle fibrosis. The usual techniques are massage, joint manipulation, physiotherapy (heat or cold, shock waves, electrotherapy, magnotherapy), acupuncture, and mesotherapy.

In the long term, fibrous tissue can become necrotic. If regular work is continued in such a case, muscle fibrosis can progress to rupture of muscle fibers or a tendon, because the muscle tissue will have lost its elastic properties.

And if the contracture was helpful? Contractures are to be considered not problems to be eliminated, but red flags indicating there is another issue to watch out for. Indeed, once the originating problem or problems have been discovered and dealt with, the contracture will no longer be necessary to the body, and will release. If it persists, that means that a deeper problem than the one you've treated still exists (for example, a stress fracture or injury to a tendon at the point of insertion into the foot, both of which are potentially difficult to identify). Sometimes a contracture is the result of an emotional or behavioral problem. If the horse is generally hyper-tense, a contracture may be due to inflammatory dysfunction of the digestive system. A hormonal problem in a mare can cause tension and contractures all over the affected side, from the jaw to the shoulder, flank, and hindquarters, as well as under the belly and the sternum (this not an exhaustive list).

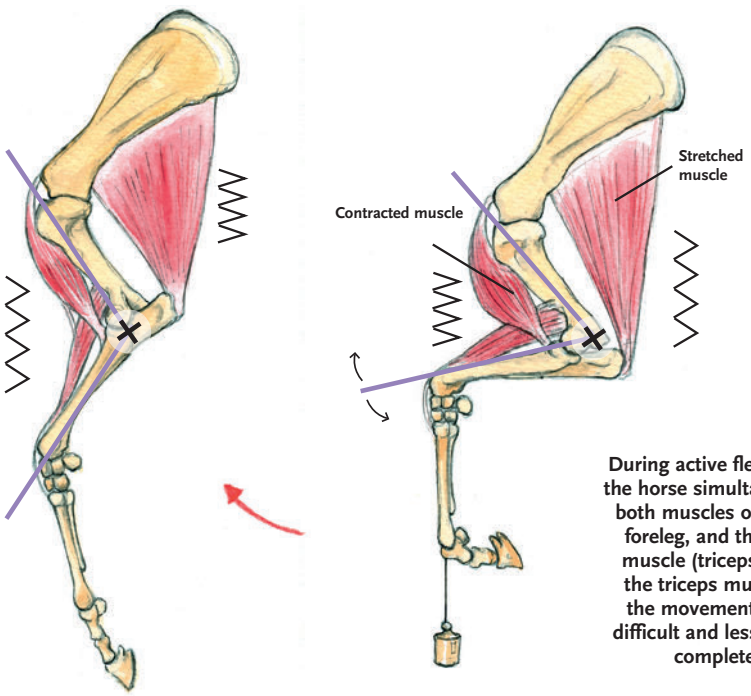
Trigger points or pressure points: this concept is described in humans as a point that projects pain, sometimes at a distance, when pressed. A precise mapping of these points and their associated pain has been established. Therapists using this method refer to a description of the location of the patient's pain, and then, based on this mapping, look for the associated point that's capable of triggering the described pain.

Once this verification is done, treatment is applied to the point through acupressure massage (pressing with the fingertip perpendicular to the surface of the skin, maintaining circular pressure for about one minute), with an acupuncture needle, or by injection, and the pain recedes. In the horse, no mapping has been done because the horse can't describe where else in the body he is feeling pain when we press on a point of tension.

Movement and resistance

To move, the horse mobilizes his joints with muscle contractions. The freer the range of motion in his joints, the easier all movements are to perform, and the less the muscles tire.

Moving a joint requires overcoming the weight of the bone or bones to be mobilized, through muscle contraction. Physiology dictates that during the contraction of



During active flexion of the elbow, the horse simultaneously contracts both muscles on the front of the foreleg, and thus the posterior muscle (triceps) is stretched. If the triceps muscle is too tight, the movement becomes more difficult and less fluid than if it is completely relaxed.

a muscle chain, there is an automatic relaxation of the opposing muscles which might otherwise slow or reverse the movement.

However, it can happen that the active muscle is forced to overcome both the weight of the bones and the resisting force of the opposing or antagonist muscles (which make the opposite movement when they contract).

Why are the antagonist muscles braking the movement?

Neurological problems aside, this unintended resistance can come from a contracture due to toxin overload, or stiffness caused by fibrosis of the antagonist muscle.

In equestrian disciplines, the search for performance often involves powerful take-offs. Muscle mass increases in volume from this kind of exercise, and often simultaneously loses flexibility. It then becomes a brake on any opposing muscles, increasing resistance to movement. It takes more muscle to gain the power to overcome that resistance, but more muscle would cause more resistance in its turn. Here we are again in another vicious circle.

The factors involved in performance on the locomotor level include, of course, muscle strength, but at the same time, there is a persistent need to lower the resistance of the muscles and improve the synchronization of movement. That way the horse will regain bounce and fluidity in his movements.

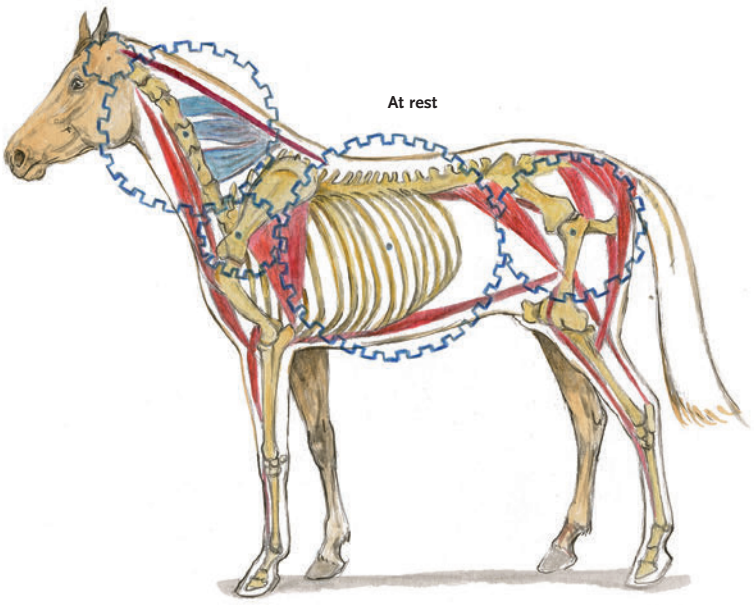
Stretching antagonist muscles lowers resistance to movement and relieves pressure on joints. With this technique, you can prevent premature wear and tear on the joints, decrease the onset of osteoarthritis, and fight inflammatory and degenerative effects on joint tissue.

✦Stretch the limbs to free the back

During equine stretching training courses, I am always asked the same thing: "But the back, I want to learn techniques for the back..." (implied: "So when are we going to start working on the important things?"). As if all the problems come from the back.

When a light bulb won't turn on anymore in a room, the problem might, of course, be the bulb—but it might also be the switch, the wire carrying electricity to the bulb, or the fuse controlling the flow of electricity to the wire. The spine is even more complicated than a light bulb; it protects the entire nervous system. If there is dysfunction anywhere along the spine, it can cause peripheral pain, and the reverse is true: a tendon or joint in a dysfunctional limb can lock a spinal area, which in turn will become painful. This osteopathic lesion will be secondary to the limb problem; therefore, it is the limb that needs to be treated, and once that treatment is successful, spinal function will correct itself automatically.

We have learned in our overview of anatomy that the postural muscles allow the underlying architecture of the skeleton to be stable. The spine is in contact with the ground through the limbs, and the brain receives sensory information from receptors in the limbs. The brain analyzes and integrates the information it receives, and sends



instructions for a postural adaptation to the back, according to the quality, amplitude, and speed of the body's movements. It is common for back pain occurring without a traumatic (fall, shock, blockage) or infectious cause to be due to hypercompensatory inflammation of another restricted area. That leaves one or more vertebrae crying out, "Help, I'm sick of doing all the work!" The solution is to give them a vacation, but also, and above all, to increase muscle length and range of motion in other areas, so that they no longer have to always compensate.

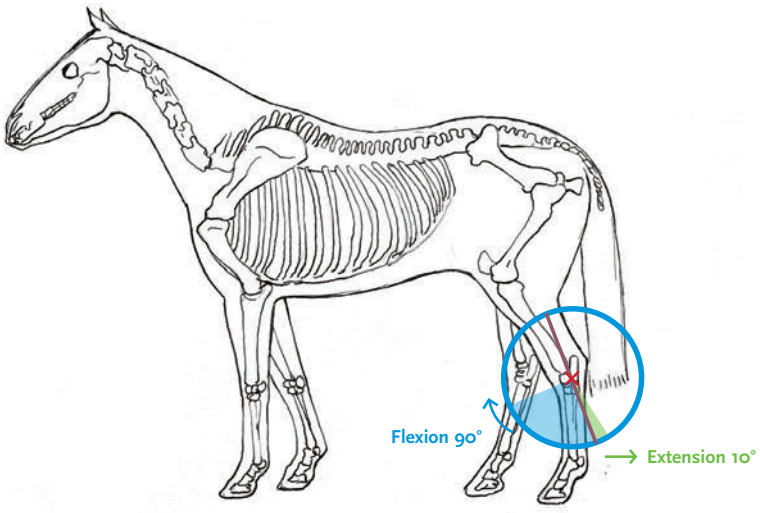
The same reasoning can apply to the forelimbs. The lengthening of the foreleg will promote a descent of the withers, and the reverse movement in the hind area will tend to lower the horse's head.

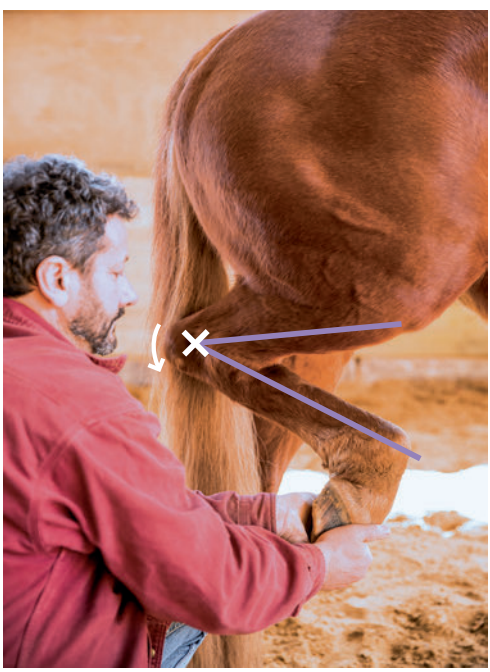
In the diagrams on the following page, we see the influence of a tension that ends up distributed across all the rest of the body. This prevents a lot of wear and even damage to certain structures of the musculoskeletal system. The explanation for many spinal pains can be given by these "cogs," and the way they distribute strain.

Take the example of a horse with retraction of the anterior muscles of the hind legs. These tensions prevent him from extending very far behind in his strides. To improve the range of motion for this extension, the lumbar vertebrae are forced to compensate with greater downward tilt mobility. Inflammation of the lower back is then inevitable, because the lumbar vertebrae are over-stressed. The muscles that surround this area are working at the limits of their physiology. They get tired, and very quickly the area becomes stiff and takes longer and longer to warm up. There is inflammation that will need to be treated in the spine—but until the flexor muscles gain length, that inflammation will never be gone for long.

Mobilization of the hock

The tarsus is a cluster of several rows of bones. It articulates between the tibia and the metatarsus. The hock is surrounded by tendons, which are themselves surrounded by circular fasciae that keep them sliding during movement.





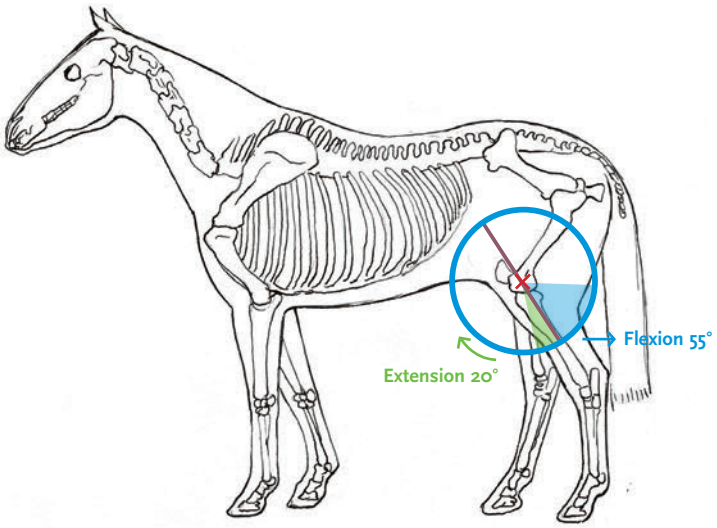
▼ FLEXION

Grasp the hoof securely with your hands. Bend the hind leg to bring the fetlock closer to the knee, while leaving the stifle unconstrained.

Stifle mobilization

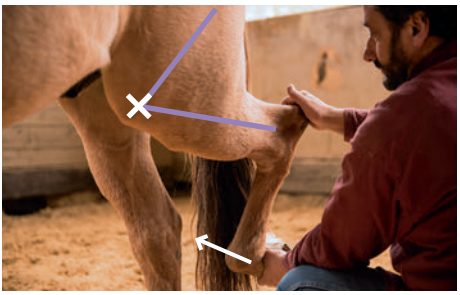
This joint corresponds to the knee in humans. It brings together the femur, the tibia, and the patella. It is a very elaborate joint because it must be very mobile in flexion, but stable under pressure. The main movement of the stifle is flexion-extension. The stifle locks when in extension, and allows minimal rotations when in flexion.

Rotational movements can only be done by flexing the stifle in order to relax the collateral ligaments. To check the movement of the rotating femur, just watch the anterior tuberosity of the tibia move during the test.



▼ FLEXION

Grasp the hoof securely with your hands. Bend the hind leg to bring the point of the hock as close as possible to the point of the buttock.



INTERNAL ROTATION ▼

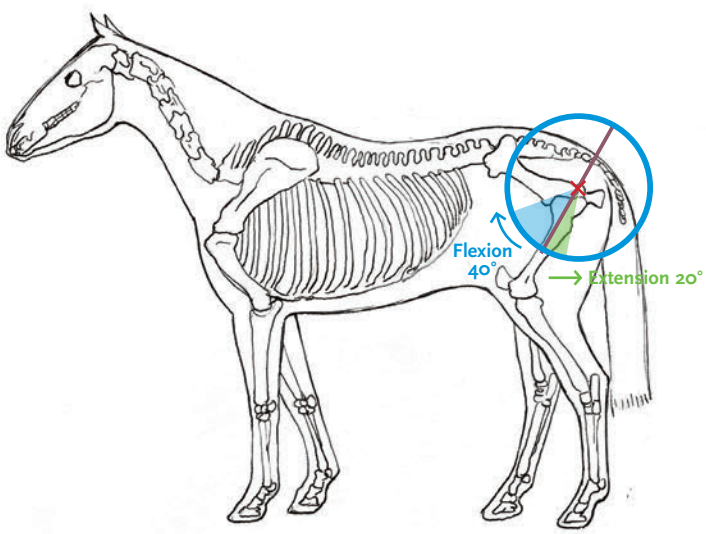
Your right hand grasps the point of the hock, and your left hand grips the leg by the hoof or pastern. Rest your left wrist on your knee. The cannon bone must be vertical, and the hock must be flexed at 90°. You anchor a fixed point with your right hand, and your left hand pushes the foot away from you to create internal rotation in the stifle.

EXTERNAL ROTATION ◄

Use the same grip as for internal rotation, but this time your left hand pulls the foot toward you to create external rotation in the stifle.

Hip mobilization

The hip connects the posterior to the pelvic girdle. Its function is to orient the limb in all directions, while having a role of stability. The interlocking of the head of the femur in the pelvis gives it stability and allows it to withstand significant forces. It is surrounded by very powerful ligaments, as well as an impressive mass of muscles.



▼ FLEXION

Grasp the hoof with your hands. Bend the hind leg to bring the stifle forward and upward. The hind leg will be folded like an accordion. Depending on the size of the horse, you will need to kneel high, or even stand, until you feel the stretch caused by the tilt of the pelvis reach a natural limit.

▼ EXTENSION

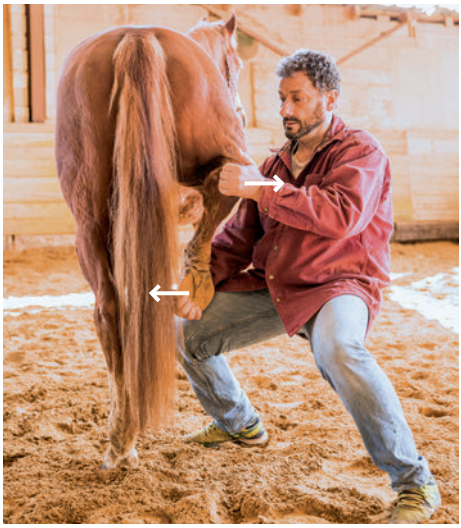
Grasp the cannon bone with your right hand, with the thumb in opposition but not digging in (safety grip). With your left hand, grab the pastern. Gradually draw the hind leg backward.

▼ EXTENSION (VARIATION)

Grasp the fetlock with your left hand, and gradually draw the hind leg backward to rest it on your left knee. Let the horse relax. Your right hand can relax the horse's muscles with a reassuring touch, and balance you at the same time. Place most of your body weight on your right foot, to avoid too much compression on the foot on which the weight of horse's cannon bone is already resting.

▼ EXTERNAL ROTATION

Grasp the point of the hock with your left hand, and hold the hind leg steady by the hoof with your right hand (safety grip). Rest your right wrist on your knee. The knee is flexed 90°. You thus create a fixed point with your rightt hand, and your left hand pushes the hock away from you to create external rotation in the hip.



▼ INTERNAL ROTATION

Use the same grip as for external rotation, but this time your left hand pulls the hock toward you to obtain internal rotation.

▼ ADDUCTION + FLEXION

Starting in the neutral position, lift the flexed limb slightly, place your shoulder on the lateral aspect of the thigh, and gradually push with your shoulder, downward and toward the midline of the horse's body.

▼ ABDUCTION

Starting in the neutral position, bring the limb into flexion while very slowly rising to your feet. Place your right hand on the buttock at the level of the hip. Your left hand raises the hind leg laterally. The hip opens, and the spine adapts by rotating to the opposite side. Be careful not to force it; there is no point in taking this stretch especially far, and the horse may react defensively and push you back. The range of motion for abduction here is limited.