Each of us - human or horse - is born with a “birthday suit”, which we usually think of as our skin. Actually our skin is an important organ of the body (see NHM Volume 8, Issue 1, Skin: The Boundary Between Earth, Heaven and Horse). The real "suit" is the connective tissue called fascia that extends throughout our body, not only lying just beneath the skin but also surrounding and connecting every organ, muscle, bone, nerve and blood vessel, and more. Fascia is a continuous web that surrounds and separates, supports and protects us down to the cellular level, while also allowing us to move freely.

Like a spider web, fascia is immensely strong; someone has estimated that it can withstand more than 2000 pounds of pressure per square inch. Fascia looks like a continuous sheet of slinky, wet plastic wrap or bubble wrap, but has a crystalline structure that can change from a gel-like state to a solid and back again.

Fascia shape-shifts into tough, flexible supporting structures like ligaments and tendons, and forms the ‘bursae’ that reduce friction and allow free movement over joints. One of its most important jobs is to produce scar tissue after an injury, to stabilize the area while it’s being repaired. Another vital job is to keep the muscles separate so that they can slide past each other as they work in different directions.

While fascia is busy supporting the physical body, it is also making space for delivery of fluids, nutrients and oxygen as well as removal of toxins and waste. Immune cells within it help keep the body safe from invaders. It provides a place for fat storage that helps insulate the body, and also helps dissipate the heat produced when muscles are working. Electrical impulses flow through it and it is thought that the energy or life force known as “chi” in Chinese medicine flows through it as well.

**When Fascia Is Challenged**

If healthy fascia can be supportive, allow the skin to change shape, and enable muscles to slide past each other, all the while maintaining that vital space for circulation in every system, then what could possibly go wrong?

When fascia is injured, an inflammatory response changes it from a squishy gel to a stiff solid and affects electrical conductivity, muscle

---

*Which horse has healthy fascia?*

*Compare the flexibility, power and lightness of the black horse, Star, with the stiff, worried, painfully tense bay, Rainier.*

*Unhealthy fascia in this 14-year-old dressage/show jumping horse, Rainier, affected his skin, stomach, kidneys, and liver.*

*Will, a 5-year-old polo horse, had problems that were mostly muscle and nerve-related.*
contractions, blood circulation, lymphatic drainage, and the circulation of fluid in the brain and spinal cord. Restrictions in the fascia may also impact the flow of chi.

All of this congestion impacts the horse’s ability to move and to learn. Stiffened fascia leads to poor posture and biomechanics, with lowered strength and endurance. With an impeded or painful nervous system, it can lead to dull, reactive or unpredictable behavior.

Like any other part of the body, maintenance and repair of fascia is affected by poor or unbalanced nutrition.

Chronic pain or stress also impacts the fascia. Constant tension in the muscles reduces circulation, causing the fascia to become stiff and dry.

Fascia is often damaged by trauma: blows, strains, tears, or lacerations. As a natural part of healing, scar tissue forms at the site of damage, then disappears during the repair process. Often, however, poor circulation, lack of movement, and/or incomplete nutrition don’t allow the healing process to be completed, leaving behind adhesions (stuck-together tissues) and stiffness.

A deep brand on the flank, colic surgery scars, or an extensive gelding scar often “glues” skin and fascia to the underlying muscles and can have a major effect on hindquarter movement.

Chronic overwork or repeated injuries also affect fascia. If a horse is trained into an artificial way of standing or moving, or worked beyond his ability to recover completely, or kept in a constant state of tension, the fascia is stressed along with overused muscles, tendons and ligaments.

Turning Back the Clock

When we notice that our horse’s “birthday suit” is too tight, when the skin doesn’t slip over the body, and movement is stiff and short, what can we do?

One holistic vet used to say, “What the body can do, it can undo.” The body has a built-in memory of its proper shape and healthy movement or function, and how it feels to live free of pain and restriction. It has a powerful, built-in desire to return to health.

This is especially true for fascia. It is able to change from a solid back to a gel, responding to pressure by warming and moving. Human touch can free up fascia, through a technique called “myofascial release” or “fascial release”. (“Myo” is a Greek word meaning “muscle.”) Structural Integration, as developed by Ida Rolf, is another term for myofascial release.

As we work with the fascia, tension eases, which lowers resistance to flow, reduces pressure on pain-sensitive tissues (nerves and blood vessels), and restores proper mechanical length and alignment to the muscles. Joints are set free to move, and the horse’s flexibility, coordination, and strength improve.

Myofascial release is also a simple way to improve trust and communication between horse and human. It is valuable for troubled or abused horses, as it can help the horse learn to associate human touch with warmth, pain relief, and relaxation.

Bring Your Horse Back to Life

Myofascial release consists of applying non-threatening pressure to an area over enough time to ease restrictions. You may use your hands, fingers, or forearm to apply gentle pressure, remaining in one place while...
the area warms and begins to move. Usually this begins to happen within a minute. When the movement stops (within about three minutes), you release the pressure and move to another area. In some parts of the body, such as to affect the gelding scar, a slow, steady stretch is applied until there is movement and release in the tissues.

Myofascial release is always painless and unforced. Use the least pressure needed to make a change. You and the horse are partners in releasing tension and allowing improved circulation. You can also help by having a clear intention to restore the fascia to its normal gel-like and pliable state.

How to Address Problem Areas

- **Fascia just under the skin** allows the whole body room to live in, and improves circulation to the skin so it can perform its many functions. As life goes on, this superficial fascia might shrink, pucker, or tear, becoming tight or twisted.

To begin, scan for areas where the skin does not move over the body. You might find these on the upper shoulders or neck, the back, and over the upper rib cage or the croup. Many horses have tight fascia over their face.

Rather than start in the middle of the restriction, find where the “edge” is and begin work there, moving into the restriction as the skin softens.

- **The middle layer of fascia** holds the organs, vessels, nerves, bones, and muscles in place; it organizes the body, forms compartments, and surrounds every layer of muscle fibers. When it is tight, it prevents full muscle contraction and relaxation, and lowers circulation and nerve conductance, leading to compromised tissues and organs all over the body. To clear fascial restrictions in the middle layers, use more focused pressure to affect deeper tissues (e.g. fingertips rather than the palm).

- **Scar tissue** can disappear over time as you bring circulation in and help the body heal the area. Apply pressure (usually with two or three fingers), move slowly in an arc, wait for softening, then move to another section and repeat.

- **The deepest layer of fascia** is the membrane surrounding the brain and spinal cord. This layer must be free of twists and constrictions so that the central nervous system can function. It’s best to approach this layer after some instruction in very subtle release known as “craniocasural therapy”. The Upledger Institute is the pioneer in this field (www. upledger.com).

- Gentle movement and stretching are important to restore a healthy flow of movement and good posture. You can unwind fascia by moving a part of the body, or helping the whole horse move, into a release position. Books and other media illustrate these moves.

About the author:
Barbara Chasteen, BA Zoology, integrates her knowledge of equine anatomy and biomechanics with a range of bodywork techniques to restore healthy posture and movement in equine athletes. She has a special interest in the holistic rehabilitation of ‘hopeless’ cases. A teacher, writer, illustrator, and equine bodywork specialist, she lives and rides her horses in Northern California.

For more information:
Doris K. Halstead: Release the Potential, a well-illustrated guide with a section on the rider’s posture (www.reachintolife.com)
John/Mark Barnes: quality equine myofascial release courses (www.myofascialrelease.com/home.asp)
Linda Tellington-Jones: many of her TTEAM techniques are myofascial in nature (www. ttouch.com)