CHIROPRACTIC

WHAT IS IT? – HOW DOES IT WORK? – HOW DO I FIND A COMPETENT CHIROPRACTOR?

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Throughout the years, I have been asked so many questions about Chiropractic that I feel the time has come to answer by way of an article. So, let's look at those frequently asked questions.

Chiropractic: Rule number one: *Be a skeptic*
Chiropractic: Caveat to rule number one: *Be a skeptic with an open mind. Remember that "the mind is like a parachute – it only works when it is open"*.

What Is Chiropractic?

People often say to me, "I am a great believer in Chiropractic." Others say, "I don't believe in chiropractic. Chiropractic is not a faith based belief system. It is not an "Amen, I believe," state of mind. There is objective science involved when the time is taken to examine and understand the concepts and physiology.

Put simply, the role of the nervous system is to receive and transmit signals from all body parts (including internal organs) to the spinal column, the brainstem, or the brain itself Together, they are referred to as the "Central Nervous System" or just "CNS:). This "central nervous system's" function then is to interpret those signals and send back a message to the sending body part or organ.

From locomotion, balance and performance standpoints, our muscles, tendons, ligaments and joints needs a "clear nerve channel" that has no transmission barriers in order to send to the CNS and to receive instructions back from the CNS.

If there a lack of motion within a vertebral joint, an inflammatory response occurs around the nerve root. This limits the transmission of impulses into the spinal column (spinal nerve tracts) that carries the message to the brain. If the brain doesn't clearly get the message, it cannot respond by sending an appropriate neural response back through the system to the body. This is much like an electrical signal that is meeting too much electrical resistance and does not have enough power force through.

Chiropractic is an application of a health care system designed to restore joint mobility and assure that messages from the body are received by the brain for interpretation and be able to return an appropriate neural message to the body part sending the message.

Yah, so what does all this fancy description mean to my horse? All skeletal muscles work via an appropriate nerve signal. Bones, ligaments and tendons, and joints can "only do what muscles tell them to do." *So to create balanced and functional movement, the nerve supply to the muscles must be clearly received and acted upon.*

So, what does a chiropractor do to make this happen?... What is an "adjustment?"

Let me use an example. If you turn your head to one side, it comfortably moves a certain distance. This zone of turning is called *"active range of motion."* If you then gently push your chin your head turns more. It will comfortably go several more degrees. This zone of additionally movement is the *"passive range of motion."* It stops at what is called the *"elastic barrier."* Said another way, the vertebrae of the neck are *"brought to a state of tension."* During chiropractic" adjustment" of a vertebral joint, the vertebra is pushed slightly beyond the "elastic barrier" into what is termed *"para-physiologic space."*

The adjustment activates my neural receptors and creates a strong incoming signal that allows it to pass through and into the spinal cord. The adjustment, properly made, is created by a *short lever – high velocity thrust that follows the plane of the joint surfaces.* It must be just forceful enough to push the specific joint being adjusted into this "paraphysiologic space." This short lever requires a carefully selected contact point on the vertebrae that may only be a few centimeters from the joint surfaces.

To understand the "force" of a chiropractic adjustment, let me explain that *force is equal to mass (strength) times the velocity (speed) of the thrust.* Thus, the faster the speed of the adjustment, the less strength that is required. Thus, as an example, it is the acceleration of the head of the hammer that drives the nail. The hammer cannot with mass alone push the nail in to the board if you do not swing it (increase speed). The direction of the adjusting thrust must follow the direction of the joint surfaces.

What's happening when you do this adjustment?
Joint surfaces and the supporting tissues are richly supplied with receptors that transmit information to the central nervous system (spinal cord, brainstem and brain). The act of "adjusting" (moving) the vertebral joint into this para-spinal space recruits thousands of receptors that cause a strong enhanced signal to be sent. This signal is strong enough to force its way across the "inflammatory barrier" set up by the immobilized vertebra or vertebrae. This allows that clear signal to be sent to the central nervous system (CNS).

(As a metaphor, think of the adjustment as hooking up "jumper cables" to get a strong enough burst of energy to the provide the battery with enough electrical energy that can then send enough "juice" for the starter to operate properly.)

How can you adjust something as big as a horse?

The answer is that one does not adjust a horse. Done properly, a chiropractor adjusts a single vertebra at a time and perhaps just one particular pair of facet joints on the vertebrae. These joint surfaces are relatively flat and about the size of a thumbnail. Let me provide you with an example that you can try for yourself. Take two coins and lay one on top of the other with one edge protruding. If one quickly pushes one over the other along their plane of contact, it takes very little strength to move the coin. So the secret is to carefully examine and determine which vertebrae are not moving freely through their range of motion (the distance one should be able to traverse over the other.) and make the adjustment. This takes relatively little strength.

I have been told that my horse has a bone out of place and that he has a pinched nerve because of it. How does that happen? Short answer – they don't.

If a bone is truly out of place – in other words *it has been torn loose from its stabilizing structures,* you have a job for the surgeon or the pathologist. Likewise except in rare situations, *nerves are not getting pinched*. What does happen is that for many reasons, the vertebrae "get stuck" and do not move as freely as they should. Sometimes the restriction is just in one direction or "vector" that they are not free to move. In other situations that vertebra or those vertebrae may be "stuck" in several directions in which they should be able to move. In a normal situation the spine moves via the vertebral joint and its "disc." They should move in a number of directions but sometimes a vertebra will become fixed in a position where it cannot "toggle" back to its neutral (resting) position. Visually, the vertebra will appear to be out of line with its neighbors, but the fact is that it just got stuck within a position that nature allows and intends it to go, but also that nature intended for it to go back to its neutral position.

Now, regarding the so called "pinched nerve" The nerve root exits from the spinal cord via an opening called a "foramen." This exit point is very near the vertebral joints. When the joints don't move, chemicals in the receptors on their surface (chemo-receptors) set up an inflammatory response and pain results. The nerve root is not pinched, but, it is inflamed and therefore, painful.

How does my horse come to need chiropractic in the first place?

Most of us assume that there had to be an injury. Well, there is, but not in the usual way that we think of it. Most occur from little "micro" traumas that are repeated over and over and over until the body no longer compensates adequately. The list of these micro traumas would fill and entire paper, but they range from things as simple as a bit or bridle that doesn't fit, dental issues, a saddle fit problem, a girth that is pinching, a horse that is not relaxed in the work it is doing, a rider whose hands are not a giving as much as required, muscle strains form a particular type of work and yes, finally to an outright blow or fall. The point is that most recurring microtrauma can be likened to the seam of a pair of new jeans rubbing your leg until finally a sore is produced.

How can I tell if my horse needs chiropractic?

Start by looking back to whether the horse is experiencing performance deficits. A, list of performance problems can be lengthy and could fill any remaining space, but almost any performance deficit is a potential chiropractic case. Back pain is always a red flag for performance and much back pain can be helped with chiropractic.

Check to see whether your horse can bend its neck to both sides easily or whether is there more difficulty in one direction. Does the neck make an even flowing curve when bent or is there a large flat spot that may indicate that one pair of vertebrae does not have appropriate mobility? Pain when the muscles of the wither pocket (the pocket where the saddle rests) are palpated may indicate chiropractic issues in the upper thoracic vertebrae (the vertebrae that form the withers).

Feel by touching (palpating) fairly strongly along each tip each vertebrae that you can find. A sharp reaction that you did not induce when pressing on and around a vertebra in front of or behind the one that you are palpating would *likely* have a chiropractic problem and exhibit restricted or no motion.

Most good veterinary chiropractors will work with you to help you identify when you are likely to have a problem. I often cover this subject in seminars for horsepersons and teach a technique of finding sensitive muscles associated with a vertebral dysfunction. It is, unfortunately, not a technique that can be covered in this discussion.

I've been thinking, that "adjustment" business sounds pretty delicate. Can my horse be hurt with a chiropractic "adjustment."

The answer is a qualified YES. That is to say that if the person doing the manipulation is not properly trained and skilled and he/she applies to much force the answer is yes. If the adjustment is carried out with too much force the joint is carried beyond the end of the physiologic space and into or through the *"anatomical barrier,"* it can damage the tissues

that support the vertebrae resulting in pain and further dysfunction. *Properly performed an adjustment should never injure or even be painful for the horse.*

The caveat is then to select a well educated, well trained, and certified person to do the adjustments. So, let's discuss how to find a "good" chiropractor" and some questions that one can ask to determine his/her knowledge.

How does one find a knowledgeable and competent animal chiropractor?

The question is in large part answered by what has already been written. In other words, ask these same questions that have been here-to-fore been written about. For example ask what is chiropractic? What is a chiropractic adjustment? What is happening to the body when you do a chiropractic adjustment? How do bones get out of place and the nerves get pinched? (LOADED QUESTION!). You also want to question where they got their education and how long they have been doing chiropractic. Do not hesitate to ask for, *and check out*, references. It is your horse and your pocketbook. You have every right to ask questions.

A few things you, the reader should know. In the United States, by law, anyone practicing animal chiropractic must be a licensed veterinarian, except that in some states (most), a licensed human chiropractor may see patients under the direction (and license) of a referring veterinarian. The reasons for legal restrictions are found in the question, "Can chiropractic hurt my horse?"

A good knowledge of the anatomy and biomechanics of the spine, combined with good classroom background and supervised teaching of technique, enable a trained person to do much good and avoid doing harm. There are "lay" chiropractors that abound in the horse world. They vary in their skill, but the key concern is that they do not have formal training, nor do they possess credentials.

Many lay (and a few veterinarians who have learned from lay chiropractors) practice a form of manipulation that is referred to as "long lever." Remember, that it was stated earlier that *the best chiropractic uses a very short lever, high velocity "thrust" that minimizes any risks.* Long lever techniques use the sudden yanking or jerking of an entire limb to affect for example anything in the neck or, in the case of a hind limb, anything in the pelvis. These types of manipulations are wrongly adapted from sophisticated human osteopathic moves that use long levers moves (very carefully and gently applied) to "adjust" certain structures.

Using the entire limb to adjust a structure that located several feet from the offending structure (such as a vertebral joint), increases the risk of injury to the horse, (as well as to the manipulator). For example, lifting a hind leg out sideways until it is high as it can get followed by a sudden upward thrust can damage the hip joint structures.

Other sources of injury include hammers, mallets or other leverage devices. There are essentially no adjustments that the horse needs that can not be done with the hands only. Occasionally one will see the use of an "Activator." These are a spring loaded device in which the tension can be adjusted to provide a high speed thrust from a very light to a significantly high force thrust. They still require good knowledge of anatomy, points of contact, direction of force applied, and the physiology that is involved in a chiropractic adjustment. The same questions already presented should be asked of a person performing chiropractic with an "activator." Another caveat must be stated. A veterinarian without formal chiropractic training can legally perform chiropractic, so just because the person doing the manipulation does not guarantee any level of competency or certification.

A "good" equine chiropractor should take a good history; and look for the "root cause" of the problem. These would include considerations such as muscle issues, the likelihood of saddle fit or other tack induced problems, the state of the teeth, and or foot problems. A "good" equine chiropractor will, in the author's opinion, also watch the horses movement before adjusting. This is, of course, not possible in some circumstances.

I use massage for my horse. Would he still require chiropractic?

When vertebrae are not moving properly, the result is painful muscles. In some instances the vertebral issue may be resolved by dealing with the muscle problem. However, this is often the case. Massage is a great follow up and maintenance modality for horses receiving chiropractic. I often heartily recommend massage therapy as a follow up if the case is difficult or the problems extensive. Typically a good massage four or five days after chiropractic is quite helpful in achieving quicker resolution of the problems.

The other end of this spectrum is that the muscle tension/pain that resulted from the vertebral issues may recreate the vertebral problem is they are not addressed and released. It is my strongly felt opinion that a good chiropractor should address the muscle issues concomitantly when doing chiropractic manipulation. The combination of chiropractic and acupuncture is a terrific combination. The sum of therapeutic value is greater than the use of either one by itself. Acupuncture is a superb therapeutic option for addressing muscle issues. The combination of chiropractic and acupuncture will resolve cases with fewer visits and usually with less overall expense.

Stretching programs are also very helpful. However, I recognize that horsepersons most prefer to be riding rather than providing therapy. If you are a person who has the time and the inclination, you can do an enormous amount of good for your horse and obviate some of the need for chiropractic.

In contrast to conventional veterinary medicine and in human medicine, where the process is usually to wait until there is lameness or a disease present and then provide treatment. Chiropractic therapy and acupuncture, on the other hand, are able to identify pathology at the point where there are not yet overt (actual) symptoms. This stage of pathology is called "asymptomatic dysfunction." This gives the caring and discerning rider an opportunity to keep the horse comfortable and at peak performance instead of waiting for a problem to really manifest before providing treatment. A chiropractic maintenance program fills the bill in this instance.

The more work and the harder the work that your horse is required to perform, the greater the risk of injury. Think about it, this is true of any athlete that is trying to sit on that "knife's edge" of not quite at peak to suddenly going over the peak and incurring an injury. Maintenance evaluation holds the promise of fewer injuries and better performance during your season.

During the height of competition season, I recommend an evaluation on a monthly basis. During the "off" seasons or for horses that are in lighter work an evaluation every three or four months or even every six months may suffice.

Conclusions:

Properly performed Chiropractic alone, or in combination with other Integrative Medicine modalities or systems can provide much good for horses and other animals. It provides an excellent source for all those performance problems and is not well addressed in conventional veterinary training.

As valuable as it is, I do not see chiropractic or any of the other Integrative Medicine modalities as substitutes for conventional medicine. They all work hand in hand with your primary care veterinarian's treatment and enhance the final desired results. A team approach is your horse's best friend.