



## **Dr. Beverly Gordon**

Gordon Chiropractic, P.C.  
*www.TheHorseInMotion.com*  
*TheHorseInMotion@aol.com*  
*EquineDC@aol.com*

The Horse In Motion, LLC, Pres.  
*Oyster Bay, NY 11771*  
*Wellington, FL, 33414*  
*cell # (516) 606-4141*

---

### **RESISTANCES, TRAINING AND SOUNDNESS**

Recently, I was asked why a particular horse continually developed soundness problems. Knowing how this particular horse carries himself in his movement, his developing soundness problems was not at all surprising. But what was surprising was how little understanding the owner had regarding the relationship between training, balance, and soundness.

In an effort to help clarify this relationship, I thought it might be helpful to address two pertinent points in this month's discussion;

- 1- understanding how resistances cause unsoundness
- 2- alleviating resistances to improve soundness

#### **RESISTANCES**

Everybody wants a sound horse, yet many unsoundness are directly (though unintentionally) caused by training. Therefore, it is helpful to understand and identify certain issues which are at the very core of training a sound horse. First, we need to define and understand something called resistances. This is a confusing term because there are several different definitions of resistance depending upon who is doing the defining and the context of the discussion. Natural horsemen often define resistances as the horse's inability to yield to pressure. Trainers often use the term resistance to refer to evasions horses develop. Resistance is such a complicated issue and understanding it is so relevant to improving movement and performance that I will be dedicating an entire future article on explaining and classifying resistances. For our purposes here, however, we will assume a resistance to be any action or response from the horse which interferes with either our training or our communication with our horse.

While defining the term resistance helps clarify it, we need to also understand how these resistances can hinder both physical development and efficient movement thereby causing unsoundness in the horse.

#### **PHYSICAL EFFECT OF RESISTANCES**

When a horse responds with tension or inhibited movement from resistance of any kind, be it mental or physical in nature, there is always a change in muscle function (this is true for the rider as well). Many of us can surely see a resistant horse moving with tense

---

muscles. (Ugh!) One can often see these horses moving with their heads up, their backs down, and their strides shortened. Clearly, resistances interfere with the freedom of movement we seek to create in our horses. Resistances such as tension in the back or mouth, dullness to the leg, lack of suppleness, and uneven gaits interfere with horse's ability to achieve his potential for expressive movement and self-carriage. But resistances can also affect the soundness of the horse by causing unbalanced movement and uneven muscle development. This commonly causes muscles to be weaker on one side and results in joint instability. Ultimately, the biomechanics become altered, wear and tear stresses increase and the horse becomes unsound.

## **ALLEVIATING RESISTANCES TO CREATE A SOUND HORSE**

When we talk about soundness, we need to learn a bit about biomechanics, which is basically defined as the mechanics of movement. Simply stated, biomechanics refers to those forces exerted by muscles and gravity on the skeletal structure during movement.

Understanding resistances and their relationship to soundness means understanding that uneven movement increases wear and tear stresses on the body which would eventually disable your horse. A simple rule to remember: uneven physical stress on locomotor structures creates unsoundness.

So, how can we develop a training program for maintaining soundness by reducing resistances? Obviously such a program would be based upon creating uniform movement and producing efficient form and function. Here are a few rules to follow.

### **Rule 1. Develop strong core muscles**

You have probably heard the term 'ride your horse up through the back.' Horses using their back and abdominal (core) muscles have a greater potential to stay sound. Roundness through the back aided by strong abdominal muscles increase the horse's ability to safely collect, bear weight, and flex joints. Developing strong core muscles is equally important for the rider as well. Core muscles support and empower balance and self-carriage. It also looks prettier!

### **Rule 2. Create Straightness**

Straightness is essential to soundness. Crooked horses naturally use their muscles unevenly (that is why they are crooked)! Sometimes straightening and rebalancing is all that is necessary to get an unsound horse to be sound! Riders also have a responsibility to ride evenly and balanced if they want a sound horse. At this point I should mention that a crooked rider will likely create a crooked horse, which would likely create some tension and resistance, which would likely create unsoundness at some point. Get the picture?

### **Rule 3. Improve fitness**



Just as fit human athletes are less prone to injury, so are fit horses. Horses need to be strong, flexible, supple, and aerobically fit. Use transitions, and changes of pace and direction to flex joints and lower hindquarters. This will allow the horse to develop the muscles necessary to increase carrying capacity of the hind quarters and work more efficiently with less risk of injury. Alternate between lengthened and collected strides within each gait, both on a circle and a straight line. Also, cross training has the same benefits for the horse as it does for the human athlete, so be creative and offer a variety of physical activities. Cross training also has the added benefit of keeping your horse (and yourself) interested.

In summary, horses are athletes, and can succumb to the same injuries and stresses (unsoundness) as their human counterpart. Therefore they should be treated as athletes with their coaches (us) understanding that they need to be physically prepared for the work they are asked to do. While all unsoundness are not directly related to training, a surprisingly large number of unsound horses can become (and stay) sound with proper training.

Until next time,

Dr. Bev Gordon

---