

## EEG Study of Equine Brain Waves

by Linda Tellington-Jones

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Psychotherapist Robin Bernhard attended a week-long Tellington Training with me near Middleburg, Virginia two years ago and took her new information home to work with her mare Grace. Grace had a very bad, and often dangerous habit, of rushing under saddle. Robin hoped to improve her mare using Tellington TTouch and became intrigued with the idea of monitoring the mare's brain waves to see if a change was measurable.

Robin proposed to use a software program called the BrainMaster that she uses with humans in her psychotherapy practice. She wanted to know if TTouch could help overcome the mare's fear and rushing, and if the change would be measurable using an EEG device.

This idea was initially inspired by two informal studies I did more than twenty years ago with Anna Wise. At the time Anna was the director of the Biofeedback Institute of Boulder, Colorado ([www.annawise.com](http://www.annawise.com)). She had observed me working on horses at a demo in Santa Fe and asked if she could measure my brainwave activity to see if I was functioning in "The Awakened Mind State" that she had researched for many years with British Scientist Maxwell Cade.

### The "Awakened Mind State"

"The Awakened Mind State" ([www.biomonitors.com/MaxCadeTitle.htm](http://www.biomonitors.com/MaxCadeTitle.htm)) is considered a state of ideal functioning in which the person has a balanced activity of all four brain-wave patterns - beta, alpha, theta and delta in both hemispheres of the brain, indicating a balanced use of both logic and intuition. This particular pattern of brain waves is measured using a "Mind Mirror" developed by Maxwell Cade to measure states of consciousness. It normally takes years to attain this state which is associated with people who have mastered their art in any field or have had years of meditation and relaxed and disciplined focus.

When the initial studies indicated that I was indeed operating in this brain-wave state, Anna Wise became intrigued with the idea of studying my students to see if this activity could possibly be tied to the application of Tellington TTouch, the circular touches that calm and focus both animals and humans. Over two consecutive summers, at the Jodar Arabian Ranch outside of Boulder, Colorado, Anna Wise measured the brain wave activity of approximately 15 students each time. Much to everyone's surprise, it was discovered that the person applying the circular TTouches, as well as the person being TTouch, consistently produced this particular pattern in both hemispheres of the brain. When not doing the circular TTouches, there was no consistency as to brainwaves produced or whether left or right hemispheres would be active.

The consistency of the results with the application of the circular TTouches lead Anna Wise to pose the question: Could the brainwave activity of a horse be measured? The first summer she

chose a two-year old Thoroughbred filly who had been sent to my week-long training as a last hope. The filly had been bred to race but was explosive and unfocused, a perfect candidate to see if her behavior could be changed and if so, would the changes be indicated by brainwave activity. Anna used the same laptop computer she was using to measure my students. This meant we could only have the mare standing still. In spite of this limitation, that first attempt produced some unexpected and startling results.

In the resting state the Mind Mirror indicated wildly fluctuating brainwave activity. Not unexpected. However, as soon as the circular TTouches were applied, we were totally surprised to see activity of the same four brain wave patterns - in both hemispheres. Beta, alpha, theta and delta were present immediately whenever TTouch was applied - in other words, whenever we pushed the skin gently in a circle and a quarter. However, what particularly interested me was the presence of beta brain waves that are activated in humans whenever analytical thinking is involved.

If we stroked, petted, brushed, massaged, or pushed the skin in more than three circles on the same spot, the results varied dramatically. When the circular TTouch was applied the pattern was consistently activated in both hemispheres. Certainly not perfectly balanced in all four brainwave patterns, but present to some degree.

What really set us back on our heels was the result the following summer when Anna brought a remote device so we could move a horse through the labyrinth. Here we observed the beta brainwave activity whenever a horse stepped around the few steps of each turn in the labyrinth - an indication that a thinking process was activated during this movement.

This information supported our experience, over many years and with thousands of horses that the mental, emotional and physical balance improves markedly when horses receive TTouch or are worked through the TTEAM labyrinth.

Twenty years after these initial two experiences with the Mind Mirror, Robin Bernhard began doing EEG studies with another brainwave measuring device that supported our initial studies as well as providing new information.

The following is Robin's introduction to her studies.

Linda Tellington-Jones

### **Measuring the Effects of TTouch On Equines with EEG**

by Robin Bernhard

Linda Tellington-Jones' TTEAM approach is unique in its focus on learning through movement, specifically slow and gentle movement of the body. The slow pace of TTouch movements are intentional. Slow movement awakens the brain, increases focus, encourages quiescence and uses different muscles and neural pathways than when rapid movement is employed. Horses can learn new skills more effectively and with ease when learning through non-habitual movements that activate the development of new neural pathways. The non-habitual movements generate natural curiosity and awakening, and are not obviously linked to the behavior that the TTouch

movements are designed to change. it is amazing to see how certain touches can improve a horse's skill without ever requiring the horse to practice that skill. After a TTouch session, improved body awareness and mobility frees the horse to perform a new skill. Physical and psychological blocks to learning seem to melt away.

Read Robin Bernhard's report in the October, 2006 Equestrian Network Magazine.