

# Paul Dufresne TRAINING for COURAGE NEWSLETTER

February 2020

## **The Vagus Nerve**

In Equine Training it is very important to learn and to try to stimulate the "feel good" in a horse. In doing so, the trainer is likely to stimulate positive vagal responses. Triggering Vagal responses in the horse is extremely significant in any style of good training. Causing vagal responses in the horse results in a positive effect on the horses, as well as the humans applying it.

There is a very interesting and well written article by Markham Heid on Vagal nerve responses based on science. His discussion although geared for humans, it could easily apply to other animals, especially the horse with such a strong flight/fight reflex. If you are interested in a more thorough and good read, please check this link:  
<https://elemental.medium.com/science-confirms-that-the-vagus-nerve-is-key-to-well-being-c23fab90e211>



Illustration: Kieran Blakey

### **The Vagus Nerve is Key to Well-Being | Elemental**

*Take a deep breath. Hug a friend. Reach for the ceiling and stretch your limbs. Each of these simple acts bestows a sense of calm and comfort. And each works its soothing magic in part by activating a complicated system of nerves that connects the brain to the heart, the gut, the immune system, and many of the organs. That system is known collectively as the vagus nerve.*

These quotes below are from the above article, and a great way to lead into my training discussions. This quote from Markam Heid's article hits home for me as a trainer:

*"While some aspects of vagal activity are inscrutable, it's clear that the nerve is the governor of the parasympathetic nervous system, which helps control the body's relaxation responses. In simple terms, heightened vagal activity counteracts the stress response, which involves the sympathetic nervous system. "The sympathetic nervous system is fight or flight, while the parasympathetic nervous system is more chill out," says Stephen Silberstein, MD, a professor of neurology and director of the Headache Center at Philadelphia's Thomas Jefferson University Hospitals.*

***Pick almost any common medical condition that's made worse by stress or inflammation — everything from arthritis to inflammatory bowel disease — and there's research showing that vagus nerve stimulation can help treat it or relieve its symptoms."***

Also in this article Heid discusses PhD Tiffany Fields study suggesting that:

*"While electronic stimulation holds promise — and, in some cases, is already providing relief — for people with a range of ailments, Field says there are plenty of ways to stimulate vagal activity without a device or implant. "We know that massage and yoga promote parasympathetic nervous system activity, which is vagal activity," she says.*

*Her research has shown these and many related activities increase vagal activity via pressure receptors buried beneath the surface of the skin — receptors located throughout the body, and ones that only firm pressure or a deep stretch can reach. She points out that light touching or stroking is arousing, while a bear hug or powerful handshake are inherently soothing. **"A strong hug or a handshake promote parasympathetic activity," she says.**"*

My discussion here will attempt to point out some of those responses and various exercises that can be used to stimulate them. Many people are familiar with these exercises but not enough focus is given to the correct execution and what results should be expected and why.

In my years of training and analyzing the effects and responses, I have found that causing a horse to feel good is critical to good training and facilitating the development of quality balance in leader/follow relationship with the horse. A horse that is caused to feel good is much more receptive to our touches/manipulations, directions/guidance. When training a horse (also great with humans) and proposing a question, it is best to put the horse in a positive state before we challenge its intelligence, emotions, and physical abilities. By stimulating the vagal responses we also subdue the flight/fight mode in a horse, which in turn, will increase the threshold of fearful stimuli.

There are various ways vagal responses can be elicited with some techniques naturally more effective than others. Some techniques may also be more challenging to learn how to apply correctly. Generally, when these techniques are applied, even in a less skilled manner, they will still tend to cause a positive physical effect, just decreased. I will briefly discuss some of the methods in my training that cause positive stimulation of the vagal nerve. There is no doubt in my mind - I know there is an incredible positive effect when stimulating the vagal responses.

Some methods are more effective at controlling the amount of cortisol in the body effectively reducing it. Cortisol is released when the body feels stressed. When the horse is stimulated to feel better generally after the effect of dopamine and likely some other hormones (even opioids) the horse gets into a more relaxed state. Their responses are too significant to ignore and should be incorporated in any good training program. Discussion of positive vagal influence in this manner is not mainstream but really should be.

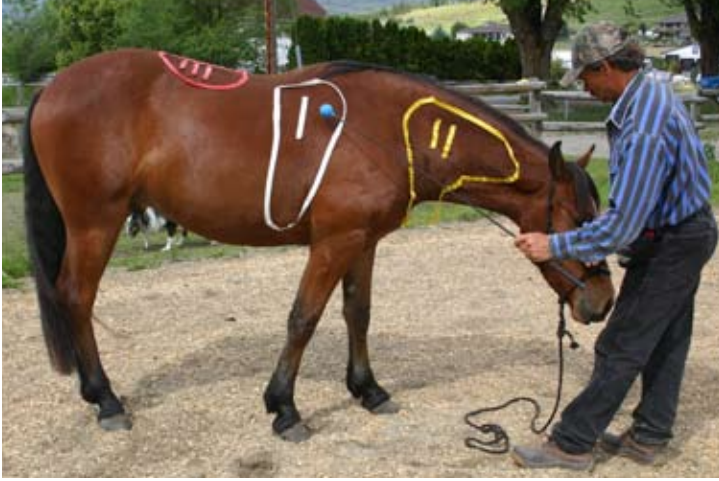
Spending time rubbing and calming your horse is one of the most common methods. This approach requires that you build up a receptiveness in the horse to those physical touches. Simply forcing yourself or your touch on the horse, as many people do, does not mean it will have a positive effect. If a horse sees you as a reliable, fair and compassionate leader/companion, it will be more receptive and inclined to accept your hugs (and may well hug you back). The key here is to ensure it is not just one sided. It is more like two horses reciprocating grooming. I put these in the category of meaningful touches. There is a calm, strong feel to this and is offered as the horse shows openness to them. I find it can be offered and developed in Liberty exercises or in-hand exercises as well.

Many people will force themselves upon a horse and think petting it will cause a positive effect. However, it often won't because the horse first has to be receptive to receiving touch and not already in fight/flight mode. The horse has to be caused to be in the mood, and there are many ways to do so. Just loving your horse is not enough. Horses are wired to be naturally drawn to leaders. Leadership is earned, not forced (the "boss" horse thing is not the idea either). To me this means that the horse is inclined to consider the suggestion (question) with some form of compliance and receptiveness to the idea.....willingly.

Again, this is just a brief discussion of one of the most common methods used, or misused, attempting to stimulate positive vagal responses in a horse. Appropriate, well-timed, meaningful touch can help ease positive compliance to our suggestions, eliciting more positive safe behavior in the horse/human relationship. This method has value but is not nearly as helpful as some other techniques discussed below.

## Endotapping

Endotapping is a very proactive method of stimulating a positive vagal response in a horse. In this method, larger muscles mass areas ( such as ribcage, neck) are stimulated with a tapotment of a ball fastened on the end of a whip. It resembles percussion massage in some ways but seems to have a much deeper effect. Even though this technique is not as well known as it should be, it is a great way to introduce relaxation to your horse in a meaningful way, while improving the leadership/follow relationship. I like to use it first to calm the horse, and cause it to start thinking of staying and playing with me - not flee or be apprehensive.



*Taped areas show the most common areas utilized in endotapping*

Once the horse shows obvious signs of relaxation (such as relaxed posture, breathing, licking, salivating, body stretches, repeated yawns) then I will start to propose questions. The questions help reinforce my leadership, while offering the horse an opportunity to comply as a positive, un-threatened relaxed follower. Any time anxiety starts to appear in the horse, the leader can regroup and stimulate them back into a strong relaxed state. If this is cued, as with a head down cue, relaxation is even more powerful.

Proper collected posture also later facilitates this whereas incorrect posture as being inverted or counter-flexed blocks this. Please read several of the endotapping articles I have written on the topic located in my website library.

<https://www.pauldufresne.com/articles.html>

As I endotap the horse, I may focus on just pure relaxation, but may change course a bit if the horse becomes pushy and evasive. Then, I will teach it simple yields and cause the horse to start respecting my space and slowing down. Once it understands not to push, but to listen for the question without being rude, I then resume my attempts to cause it to reach a much more elevated level of relaxation. In time, the flight/fight reflex becomes far less a result in any further interactions.



## Shape and Posture

Shape or posture in the horse can influence positive vagal responses. When a horse is upright with an inverted or counter-flexed shape, it becomes much more resistant and inclined to go into flight/fight mode (apparently not blocking Cortisol). When we cause a horse to go into a more positive, rounder shape it will be more inclined to go into a more relaxed state. By doing exercises that will cause a horse to assume such shapes willingly, they also become more receptive to relaxed states. This improves their emotional/intellectual/physical



abilities as well as the potential for positive development in performance and interactive skills. Many people are familiar with having the horse's head up, or down or bending. However, just forcing these postures or poses is not the answer. Suggestions to the horse to *offer* the posture is the key.

Discussions of posture leads me to the part that I feel is really being under-utilized and not taught effectively. Positive bends with pressure and touch stimulates the vagal responses. This is why bend from pressure and touch should be used as it is a reflex.

Like any technique, this can be performed more or less skillfully. Too often, people haven't learned to apply them as effectively as could be, to better benefit the horse's balance and desire to follow our lead. The more I watch horses training, the more I am astounded at the cause of this reflex being stimulated. Any time a horse is taught to bend from tip of the nose to the tail and an actual physical touch applied to the mid ribcage (most effective area also reinforces a better bend) this stimulates the horses body to relax, whether they want to or not. If a horse keeps being asked to do so, without making it anxious, the horse will not be able to help itself from achieving a more relaxed state. The actual touch to the ribcage really makes a difference to causing a relaxed state. Later this can even get to the point of the intent of pressure. The pressure should not be constant but stay on until positive change starts. This is why, when we are in-hand or riding, we should teach the green horse to bend around the touch.

The lead on the halter sends the horse in a direction/elevation and also affects the start of the bend. Pressure behind the horse will cause it to remain forward. Pressure on the ribcage, improving positive bend on the arc, will cause relaxation. A horse is always more willing to comply moving forward on a bend- it feels good! Not all higher head positions are negative. If the horse raises its head without losing its back (above the wither shifting the weight to hindquarters), this is a very good and more athletic position. This leads to another way to elicit positive vagal responses, through poll flexions.

### **Poll Flexions**

Poll flexions can be done in isolation, but work best when combined with a bend through the whole body such as in a shoulder-in on a circle or on a straight line. This flexion can be done with just a bend in the neck first, stationary or moving. The poll flexions can be stimulated at various heights but is often easier to apply with a slightly more elevated head ( higher than the wither). With the head raised we can turn the nose to one side or the other slightly. If there is a gentle upward pressure from that last position, it will cause the horse to stretch and relax the muscles of the poll (works really well with a bitless bridle or bosal, even a horse-man's halter). This stretching will cause a horse to start salivating and generally just feeling more receptive to your guidance. Emotionally the horse becomes less inclined to be



*Poll flexion with bend through body*



anxious (thus likely stimulating the vagal nerve). Physically, the horse is more easily assisted into assuming a more optimum performance posture. Intellectually, the horse will be more able to think and follow your guidance and signals. This is a natural lead up to one of the most valuable, but more poorly used techniques, "jaw-flexions".

## ***Jaw Flexions***

Jaw flexions have been used for centuries. I find the French Classical academics were some of the best at applying it. A jaw flexion can be done with a straight head position or combined with a poll flexion and/or bent neck and/or body flexion (shoulder-in on circle or straight is one of the best combined exercise).

First the horse is taught to raise its head. One can always start below the withers but sooner or later we will want the horse to raise the head above the withers, which is a much better performance posture position. The jaw-flexion can be done with one hand or two. What it is essential is that there is a differential of pressure on one side of the lip to one side of the horse, compared to the other. By causing an upward lift (not backward, but the pressure is in line with the line of the lips from front to back, usually more upward) for a moment it may cause a horse to start to lick, salivate, and relax the jaw after one or a series of several manipulations.

As a horse is stimulated to do so, it cannot help but start to relax the jaw, then the poll, and eventually also the whole top line. Also very importantly this causes a positive change in the horses "feel good." These techniques intentionally cause increased levels of cortisol/dopamine and can't help but improve a horse's emotional state and relaxation throughout the muscular system. The horse is better prepared for a more positive performance state to develop. Obviously a horse that is not anxious and in a better performance posture will be more inclined to make better intellectual decisions and have better balance. All the lateral movements when taught correctly involve these posture reflexes - bend, poll-flexions, and jaw-flexions.



*Demonstrating a Jaw Flexion*

## ***Dime Exercises***

Another great technique to cause positive posture eliciting positive vagal responses is the Dime exercise (or goat on the mountain). Teach the horse to reduce its base of support, lower the head and round the back while contracting the core and relaxing the topline.

Also included in this category of exercises are smaller props, such as pedestal or smaller boxes, as they naturally cause a horse to reduce their base of support. As the horse starts to relax with understanding, they also start to relax in their bodies as it is reflexive activity. The dime exercise is very important, although it may seem slow to develop for most people. It really helps set the posture in a horse. First, you teach the horse to relax its topline then teach how to engage its core, then to engage its core and large muscles with increased, proper elevation. Once a horse understands the basic exercise, it also can be used in setting up more advanced movements, such as piaffe, passage, pesade to keep improving the posture and strengthen the core.





On several occasions in Liberty training sessions with my performance horses, I have seen moments they were confused and a bit anxious. They went up on the pedestals or boxes on their own. At first I was inclined to pressure them to move, but recognized the slight anxious look on them. I paused and relaxed and they subsequently brought their head down and their shape rounded. The time out on the prop almost always led to a better try on the suggested pattern, after allowing them to fix themselves ( it was an eye opener).

### **Massage and Chiro**

**Deep tissue massage:** If there is excessive tension in a muscle group this can cause an imbalance or pain, which also makes it difficult to elicit positive responses. There are many different techniques in doing so. When these techniques are being practiced, it always helps if the practitioner knows how to offer the touch to the horse.

**Chiropractic:** if the spine is out causing poor function or discomfort, this will make it more difficult to elicit positive vagal responses.

Quite simply, as a leader, it is to our advantage to stimulate the horse in any or all of these techniques. Stimulating the Vagal nerve responses will cause a horse to be more supple in body, emotions, and mind. Horses that feel

good are more willing to follow your lead and also less prone to negative stresses performing the activities you desire to play with while also diminishing the fight/flight response.

Any time a leader notices a horse starts to worry or get uncomfortable, and you focus on regaining the feel good by stimulating them positively, one will have a partner that is much more willing and light to lead. The kick-back from this is that a happy horse usually leads to a happier human. I have yet to see a horse feel real good and not see a smile on the face of the leader that facilitated it.

Some other spin-offs of this is that I find if horses just have good forage, water, trace minerals, room to exercise, they do not seem to develop sore backs when ridden in the correct shape nor do they develop all of these digestive problems. Also, horses who learn to relax in good performance posture and collected frame will have less foot and leg problems. Some people may say it is just luck, but I think after over 30 years it is not! Just plan and cause your own luck!



*Chiropractic adjustment*



## 2020 INTENSIVE WORKSHOPS/CAMPS

These workshops have been designed for people who can't make it to camp dates or would like an experience with lower numbers of participants where they can just focus on the things that are important to them (this often changes as questions lead to foundation pieces that open other doors as well).

At all my clinics and camps I give people a chance to learn proper collection for their horses. It is a French Classical Dressage/Vaquero foundation that will improve all horses' posture, balance, lightness, well-being and longevity of health. By applying correct riding skills you can avoid issues such as back problems. Most of the back problems horses have are due to incorrect riding posture and not saddle fit. Many of the fore-limb issues horses have is also from not carrying their weight correctly off the hind.

Learning to lead with great Horsemanship, focused on the natural reflexes of the horses makes for much greater levels of safety and comfort for both horse and leaders. By having horses more relaxed this also helps alleviate many digestive disorders and improves their immune system, especially when coupled with simple, good feed and proper exercise. Riders are always assessed to see where they are so that we can tailor an education plan that meets their needs and keeping them safe while they develop confidence in their partnership and having a exciting time doing so.

I keep a list of interested people and match up smaller groups. It is so much better to learn with like-minded people who support each other. Smaller groups of keeners means you get to see more variations, more questions get answered, more support and a lot more laughs ( guaranteed to belly laugh)! We use the entire facility with roundpen, arena, trail courses, and can go to orchard and canyon trails, possibly also the lake.

Participants get some formal lessons every day, then go experiment as I continue training my horses. I supervise you giving you feedback when necessary.

It works well when you ride with me as I use my training horses to show you how and why we do certain techniques. I may even suggest to people to ride some of my horses or others horses to feel certain things if that will improve their understanding. We may do video analysis and some short lectures with discussion time where people may reassess their goals and desires as they get exposed to many more interesting things.

So many of my participants have said this has been their Equine Vacation where they come out to have a good time playing and learning with their horse as they improve their understanding and some great people in the gorgeous Okanagan.



All participants to date coming to these have had a great time, quite a few returning every year or two to progress in their educational journey.

These camps include a small paddock for your horse. You have to supply your own hay and food for yourself. You can camp on the farm, rent our RV or there are B&Bs and motels in Kelowna. Intensives are on a first committed/booked basis. Generally any dates that you don't see with activities on my clinic schedule could possibly be available. I do get some family time here and there but just let me know what dates you have in mind and I can confirm if they are available. Come and bring your friends and meet some great new ones!

Anyone interested or having further questions please email me at [tfcpauldufresne@gmail.com](mailto:tfcpauldufresne@gmail.com).

### Dates Pre-Booked: August 12-16, 2020

See this video on our Kalamalka provincial park and beach ride at camps in 2017. <https://youtu.be/6EfvkrLAsOE>

*\* Liberty: I only have one clinic and part of one camp where we develop Liberty. It is such an important part of an equine people relationship but many facilities are not conducive to supporting the opportunity for people to do so. It allows the horse to express itself much more because it is not under constant restraint. Many horses' interactive ability comes alive in such play. People learn to use their body language more effectively but also improve their lead while allowing their horse to be more responsible. The more responsible a horse the more freedom it can be offered. This also can free up movement in the horse and leader. When people take themselves less seriously and have fun with it both horse and leader enjoy themselves more thoroughly in this Dance.*

*\*\*Horses are not driven or given direct pressure to go into water. We show by example by ourselves, or with other horses who willingly go. Eventually horses will try to follow you. They are much less threatened to do so this way and then go because they are curious and want to join in with the others. Some get it right away but some need to do it a few times before they start to really get involved.*

### TFC Spring Clinic Schedule

April 4-5 Burnaby, BHA, , Horsemanship & CD/WD application to WE, contact RaeAnne: [raeann@armbrusters.ca](mailto:raeann@armbrusters.ca)  
Call/text 778-999-8154 Cost \$375

April 18-19, Grande Prairie, Evergreen Park, Horsemanship & CD/WD application to Gymkana/Trail, 3.5 hour group sessions both days  
Contact: [gpgymkhana@gmail.com](mailto:gpgymkhana@gmail.com) for any questions, pricing

April 25-26th, Grande Prairie, Beaverlodge Indoor arena, Horsemanship & CD/WD application to WE, Friday night demo 7pm.  
Contact Allison Guertin: [allie.guertin@gmail.com](mailto:allie.guertin@gmail.com) or 780-978-6564, Ramona rollins\_3@hotmail.com or 780-933-7078

May 2-3rd, St. Andrews, MB, Second Chance Ranch, Horsemanship & CD/WD application to WE, Friday demo 7pm  
Contact Francine: [info@2chanceranch.ca](mailto:info@2chanceranch.ca) or 204-771-5335

May 23-24th Kelowna TFC Center Horsemanship, CD/WD/Vaquero and applying this to WE/Trail for those that would like to.  
Contact Paul: [tfcpauldufresne@gmail.com](mailto:tfcpauldufresne@gmail.com) or text 250-317-7725

May 30-31st Kelowna TFC Center In-hand Horsemanship & Liberty. Contact Paul: [tfcpauldufresne@gmail.com](mailto:tfcpauldufresne@gmail.com) or text 250-317-7725

June 6-7th, Nanaimo, Vancouver Island Rhythm Riders Drill Team, Nanaimo Equestrian Centre 2300 Bowen Rd., Horsemanship, CD/WD/Vaquero and applying this to WE/Trail. Contact Samantha Bateman: 250-713-8400 or [Samanthaemt@yahoo.ca](mailto:Samanthaemt@yahoo.ca)





## TFC Summer Schedule

July 9-12 PAALH National show- Fiesta exhibitions.

Aug 1-3 Hoof Geeks Trimming clinic at TFC center ( Great anatomy section, highly recommended). This doesn't mean you necessarily become a hoof trimmer but you sure will have a better understanding of what is best for your horse and why!

August 17-21 Camp CD/WD applied to WE/Extreme trail- some Garrocha skills. Participants can piggy back an Intensive workshop prior to this camp or after it if they would like a longer vacation and study.

\*\* At my clinics and camps here in Kelowna if people give me advanced notice I can lease them a horse to take the clinic or camps with that would be suitable to their learning experience if they don't have one or can't travel with theirs.

Other Potential locations TBA : Weekday clinic in Sherwood Park, Saskatoon, Ladner/Delta, Chilliwack, Saanich & Qualicum Beach  
Anyone interested in organizing or hosting a clinic in any other location is welcome to contact me for information on costs and requirements. I would be thrilled to get the opportunity to teach in your area.

On-line Tutorials available: Email me for details! 1) Online Video Analysis coaching 2) Online Tutorials on specific topics



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- Overall soundness
- Emotional well-being
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