Fight, Flight & Freeze

by Robyn Hood

The "fight or flight" instinct is something we all recognize in horses and tend to just accept. However, we all have been put in dangerous situations because of that instinct, and more than just a few humans and horses have been hurt because of these reflexes. The following scenarios are familiar to many of us:

- A horse spooks and flees at the sight of flapping plastic.
- A tied horse pulls back and fights at the end of the lead.
- Upon approaching the trailer, the horse's head goes up and he bolts away from the trailer.

The list goes on - I imagine you could add a few of your own to the story. The same characteristics are exemplified by these horses: their heads go up, the adrenalin flows, their breathing pattern changes, and these animals simply instinctively react. They don't think.

So what are our options? Some people try to coerce the horse into submission through physical force if they still have command of the lead rope or reins. Other "hang on' and pray.

The Flight or Fight Reflex

One of the main principles of the TTEAM work is to teach a horse to override the flight or fight reflex. This is accomplished by teaching him to stop and evaluate a situation by thinking rather than by responding instinctively with flight. This instinctive reflex to flee from threatening situations was the key to horses' survival in the wild. It is no longer useful to the domesticated horse and is, in fact, the cause of many dangerous situations.

In the wild, a horse's flight or flight reflex almost always triggered her flight from something threatening her existence. She rarely chose to stand and fight if there were other paths to safety. In her vastly different life of today, however, flight is not always an option for the horse. Thus, some individuals turn their fear into fight or aggressive actions. These horses bite, kick, and when pushed to the point of feeling cornered, attack. We need to recognize that even these dramatic responses are simply the horse following her centuries-old instinct to survive.

Think about a horse walking over the top of a hill and seeing a wildly fluttering kite being flown by several running, screaming children. Threatened and frightened by this situation, the horse almost always throws her head up, snorts and flees. This posture activates the adrenal glands and over-stimulates the horses' entire nervous system.

As long as the horse's head is high and muscles are tensed, adrenalin will pump into the bloodstream and provide energy for flight or fight. One way to override this chemical countdown is to lower the head and normalize the breathing.

Biofeedback Research

Brain wave/biofeedback equipment has been used to monitor horses during TTEAM work. The data indicates that a horse is more likely to access the 'thinking' part of his brain rather than the instinctive, "reactive" part of brain when he has his head in a relaxed posture. So overcoming these potentially dangerous responses can be as simple as getting the horse to lower his head on command from the handler/rider.

For a young horse or a horse who is being re-schooled, accepting these cues from the lead shank on the ground can be the first step to getting him to respond to subtle rein/bit cues.

Freeze Reflex

While the "fight or flight" reflex is recognized the "freeze" reflex is one that is usually never considered. Think of what
happens when a horse sees something in the distance, the head goes up, the horse freezes and often so does the handler. (In this situation what often follows is the flight reflex.) There is a chemical that is released in the brain that causes the horse to freeze and the synapses stop firing. At this time, if we stroke the underside of the neck with the wand, we help start the synapses firing and the horse is inclined to lower her head. This also helps the handler start breathing and thinking instead of reacting.

We often see a similar "freeze" reflex which many people read as the horse being "stubborn" or "unwilling." This usually happens when a horse is first saddled or mounted and he stands there as if "frozen" to the ground. At this point the horse is usually holding his breath and, when the rider asks him to go forward, first with a squeeze and gradually building to a kick with the heels/spurs, the horse takes off or explodes bucking. The horse often becomes labelled as "willful", a "bronco," etc.

One of our readers recently sent me a book called ONE BRAIN by Gordon Stokes and Daniel Whiteside, it is about dyslexic learning with humans and explained a great deal about the learning process and the varying degrees of dyslexia.

In the book, they say that whenever we come up against a wall when learning a new task, it is a form of dyslexia. In the learning process, whenever there is pain, fear, or fear of pain involved, there is a release of a hormone called ACTH, which causes the animal to access the reactive or reflexive part of the brain rather than the thinking part. We may be able, at the time, to perform the function but are not necessarily able to recall the skill at another time.

This helped me, as a teacher, to better understand the behavior of many people and horses. Many people will say their horse is being resistant because he had performed a certain task before and why not now. If the horse performed the task but was unable to carry it over to another rider or another situation then perhaps true learning (the ability to transfer knowledge to another situation) did not take place. Rather the horse was put in the position to do it without thinking or really knowing how. A good trainer can make it look like the horse has learned something because the trainer has good timing. A difference between TTEAM and some other methods is that the intention of TTEAM is to teach both horse and handler to think rather than simply react.

In teaching riding, for instance, when an instructor continually yells at a student rather than finding ways to communicate the request in a way the student can understand, learning is very difficult and frustrating for both pupil and teacher. The student's brain is unable to learn because of the ACTH which is often referred to as a "stress" hormone.

The 'freeze' reflex, like the "fight and flight" reflexes can be overridden by teaching the horse to lower the head, normalize the breathing and stroke the body with the wand to "connect" the body to the brain. After the horse is focussed and thinking, we teach the horse to move forward on a signal by using a variety of the leading positions and various patterns of poles in a Confidence Course.

There is a fourth reflex which very often is not considered. When a horse is put into a situation and cannot learn or cannot react with flight, fight or freeze, the horse can "faint." Nothing is working for the horse, and he collapses.

**Lowering the Head - Three TTEAM Steps**

The first step in changing these habitual instinctive responses is to teach the horse to lower her head on cue. Without fear, force or mechanical devices, the horse learns to lower her head and overcome the instincts of flight, fight, freeze or faint.

There are three TTEAM steps for getting the horses' head down and it is important that the horse respond to each step.

It is important also to use the tools of the TTEAM work. To teach a horse to lower her head, we use a 6' nylon lead with 30' chain (or a specially-made soft rope lead) on the halter and a 4' stiff dressage whip that we call a wand because it has such magical effects. We use precision and subtle communication rather than strength or force. A step by step instruction is found in the photographs which follow.

**First Step**
This is generally the most effective, nonthreatening way to get the horse to lower her head. Start in the Cheetah Position with the wand and the end of the lead shank in the left hand. The right hand slides about two feet up the line towards the horse's head. In order to prepare the horse for the wand, stroke the underneath of the neck and continue down the legs to the hooves.

Once the horse is comfortable with this stroking, make sure you are well-balanced on the balls of your feet and squat down about 3' in front of her nose. In the case of a stallion or very nervous horse, you should start to the side/front the horse's head rather than directly in front of the horse's nose. If you don't feel balanced or agile in this position, merely bend at the waist so your upper torso is lower than the horse's head.

Once you are balanced, stroke the lower neck, chest and legs again with the wand and put a steady pressure on the lead with your thumb and forefinger. Do not close your fist around the line because this creates tension and limits flexibility and subtly. Hold this pressure for several seconds as you continue to stroke with the wand. Then slowly allow the line to slip through your fingers in a release. Repeat this "stroke/pressure/give" signal a few times until the horse lowers her head. Reward any giving of the head by the horse. She is learning to lower her head whenever she feels the light pressure on the chain. She has now started to learn to lower her head from a cue.

It is important NOT to threaten the horse with force during this process. Do not try to pull the horse's head down. Think of your posture as simply inviting him to try a lower position. Horses easily learn to mirror our body posture and body language. Take advantage of this tendency to show them a neutral, comfortable stance. You also might check your breathing pattern. Often several deep breaths on your part will trigger the same in the horse and help him to learn the exercise. Be sure to have the horse in your peripheral vision. Looking straight in the eye is more threatening.

When we first used this method of lowering the head we did so without the help of the wand to stroke the horse. Since using the wand we have found that most horses respond more quickly and high-headed horses, who will often lose their balance and step forward when asked to lower their head, are able to lower their heads and stay in balance without stepping forward.

### Second Step

From the squatting position, place your wand to the side and put your left hand on the noseband of the halter with your fingers together and cupped. Hold the right hand lightly on the chain. Slowly raise yourself to a standing position keeping the horse's head in the lowered position. After you have practiced this several times you can lower her head using this hand position while you are standing up. To avoid injury keep your fingers soft. Do not make a fist around the noseband. These two steps are particularly useful for helping the horse who pulls back when tied.

### Third Step

The third step in lowering the horse's head is also used during TTEAM body work to help reduce neck tension. Face the side of the horse's face. Place one hand several inches behind the ears on the top of the neck and the other hand on the bridge of the nose or on the noseband. (See photo 7.)

The hand on top of the crest should have the fingers on one side of the neck and the thumb on the other side. Curl your fingers and thumb slightly to lift the muscle at the top of the neck. Then gently release your fingers as you ask the head to lower with slight pressure from your hands. Move the horse's head slowly to the left and then back to the right as you continue to ask for the lower head posture. If the horse tucks his chin behind the vertical, lighten the pressure on his nose. Once the head is lowered, quietly work the area behind the ears with the Clouded Leopard TTouch as a reward. Moving the horse's head gently left and right is an excellent way to encourage flexibility. And it only takes a few moments.

The level to which you lower a horse's head is important. In most cases, the ideal height would be with the poll just about level or slightly below the withers. This will vary according to the conformation of the horse. Some horses relax/release more when the head is slightly lower. When the head is nearly level with the withers, the horse remains very "present" and is less likely to react if he is startled. A very low posture is threatenting to some horses as it puts them in a submissive position.
In addition to overcoming the flight, fight, freeze reflex, bringing the horse's head to a relaxed position puts the human higher on the pecking order without force or induced fear. It establishes a leader and a follower. At the same time, it is a pleasurable position for the horse and allows him to relax. He learns that his posture is a safe and comfortable way to be.

Clinic participants often ask whether it would be simpler to offer the horse grain to lower her head. I want the horse to respond to a signal and this establishes obedience to commands, rather than have the horse reach for food instinctively. Remember, we are trying to activate brain cells and expand the horse's self-image and ability to think.

Results

The TTEAM way of teaching a horse to lower her head on cue accomplishes the following:

- Stops adrenalin flow and preparation for flight,
- Relieves muscle tension in neck and back,
- Encourages rhythmical breathing, and
- Establishes a pecking order between handle and horse, without force.

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