



~ For Love of the Horse ~

God's greatest masterpiece in the animal world.

Maladaptive and Counterproductive Care and Training

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(A brief, objective overview of present day care and training of the domesticated horse.)

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The following review is a compilation of facts derived from the world's leading equine ethologists and research scientists with no intent to rebuke or chastize any particular individual, group or training method.

It is offered with the sincere hope of bettering the life of the domesticated horse.

And in the process, giving every horse owner who chooses, the opportunity to endear and nurture the essence, indeed the very heart and spirit of their horse.

For truly, there never was such a thing as a bad horse.

It is only tradition and our lack of in-depth understanding that distorts our perception of God's greatest masterpiece in the animal world.

Yet the questions remain:

#1. Why would anyone in their right mind malign an animal to create severe physical, mental and emotional/behavioral problems, then blame the animal and attempt to develop solutions to the problems they created in the first place?

#2. Wouldn't it be more beneficial and practical to just not malign the animal in the first place?

Maladaptive and Counterproductive Care and Training

(I.) WEANING.

It begins with the birth of a horse in a domesticated environment and 'nature versus nurture' in determining or causing individual differences, (specifically in behavioral traits).

Researchers on all sides of the nature vs nurture debate agree that the link between a gene and a behavior is not the same as cause and effect. While a gene may increase the likelihood that we, (or the horse in this case) may behave in a particular way, it does not make us or them act or react in a certain manner. Which means that we/they have choices in life. In recent years, Jaak Panksepp's 'Affective Neuroscience' and a few other leaders in the field of Social Neuroscience, (event-related potentials, molecular biology and autonomic, neuroendocrine and immune responses) lend much to the fact that our environment has a very direct and altering effect on our genetic makeup.

Let us suppose, for the moment, that the optimum scenario for an animal, (any animal including humans) is that an equal balance of nature AND nurture lends to optimum potential of any individual within a given species.

Of the four basic social structures used by various species, (Solitary, Pairs, Extended Family and Harem Groups) the success of the Harem Group model is demonstrated by our Mustang herds here in America. Though some of their productivity may be due to a sparse counterbalance of predators, the vast majority of the propagation of their species can only be attributed to their Harem Group model.

Within that social structure of the harem band, it is relatively unheard of for a foal grown into a colt or filly to leave their natal group until they are forced out by the stallion and/or lead mare, (exogamy). During that roughly two year period, they learn the accepted social behavior, hierarchy and familial/herd dynamics of their species. Colts join a bachelor band and fillies are quickly assimilated by a bachelor stallion or band stallion. (In essence, this is the 'nurture' side of the equation where they 'learn to be a horse.')

Unfortunately, the foal born in a domesticated environment is denied that developmental familia/social learning experience. Generally speaking, 'weaning' is done when the foal reaches three to six months of age.

As Doyle G. Meadows, Professor, Animal Science and John E. Henton, Professor, Department of Large Animal Clinical Sciences, College of Veterinary Medicine put it in one of their papers: "Weaning is stressful on both the mare and the foal. Many times horse producers wean foals with little regard to the emotional and physical stress that often arises. They typically wean their foals based on tradition or mere convenience."

I would tend to agree with them. Although not to be minimized, the devastating stress is not the point in this case. Not only is the 'lack of learning' a consequential factor, but also what they DO learn and from who after separation from their Mother. For as the scales are now almost completely tipped from learning/nurturing of their own species to nature/instinct, they are cast into an environment of 'learned helplessness' where human dominance rules in a world of chaos. (If it wasn't too long ago, I remember one clinician actually picking a foal up by his tail to 'teach him a lesson.')

Thus from the beginning, the domesticated foal learns submission to a dominant human being left with nothing but his instincts and genetic predispositions to guide him as he is forced into what to him are the insanely suicidal situations of domestication.

With no stretch of the imagination, we can assume that a horse raised in a complete equine social structure/harem band would certainly face the world of domestication with a greater degree of openness and self-confidence than those raised in our present day early separation of mare and foal (and the complete absence of a stallion/mother/siblings familial unit) which means no role models or familial social learning.

Acceptable equine social behavior and culture (herd manners and role-responsibility) can only be learned through the experience of interactive membership in a complete equine social group. Limiting inadequate social environments produce a number of psychological conditions which tend to malign their ability to function in social settings.

In short, they never learned what is acceptable behavior for a horse.

Will domesticated horses ever be allowed to experience their own culture the first two years of their life?

Very doubtful! (They race two year olds and the 'training' is started long before that!!)

But if we do not at the very LEAST take this into consideration, (and allow as much familial/social learning as possible) then we certainly cannot blame the horses when they react unresponsively, aversively or aggressively to our present day counterproductive methods of 'training.'

(In the interim, the domesticated horse will continue to suffer chronic stress from a very young age.)

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(II.) RESTRICTION.

While there are instances to the contrary, the horse's strongest basic instinct is self-survival. Most mares will defend their foal to a point of near death against a predator attack, but in the end they will flee. Mother nature deems the propagation of their species is afforded a greater reproductive potential if she lives, rather than chance losing both her and her foal. Thus the horse's primary means of insuring their survival is flight. Not being able to run/flee in any given split second of his life greatly DIMINISHES his ability to survive.

*Reference any/all accredited equine ethologists.

Sometime in his growth, the foal will be 'trained' to forego panic and accept the feeling of entrapment. This is usually done with the aid of a halter rope or longe line. They may also be 'trained' within the confines of a round pen or picadero. What one tends to forget when the horse balks, panics or displays aggressive/defensive posturing in that initial stage of learned helplessness, is how unnatural and frightening it can be for the .

Depending on how long it takes to break the resistance and spirit of the horse in question, this process of entrapment and force in the name of 'training' based on hierarchal dominance/submission, (Alpha theory) can be quite lengthy, (and with it, once again, create needless, excessive chronic stress).

Using restriction coupled with pressure/release, intimidation, comfort/discomfort and physical punishment to 'train' a horse in this manner, (Alpha Theory) results in a confrontational relationship based on learned helplessness and imprinting a higher hierarchal standing, (herd rank). The degree of success or failure is determined by how well the horse responds to commands both initially and over a long period of time, (which is completely dependent upon the depth of imprint required and the genetic/psychological make up of each individual horse).

*There is an alternative paradigm that teaches the horse not only all the basic ground and mounted cue/requests without the use of any type of restriction/whips/clickers/gadgets, but also establishes an interspecies preferred associates/peer attachment relationship . This eliminates the pitfalls of the adversarial/confrontational relationship, (and most importantly prevents any stress from occurring).

In a ten year international study, equine attention span using this alternative paradigm is often extended to as long as fifteen minutes or more and has been tested on horses of various genders, breeds, ages and life experiences with a 100% success rating).

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(III.) STALLING

The maladaptive management practice of stalling prevails throughout the entire world. "Horses housed in stalls are deprived of opportunities for social interaction and the performance of natural behaviors." (Haupt, 1998).

1. The innate needs of a horse are designed as a complex social structure in which a number of different levels of interactive relationships are essential as a matter of social function. Horses are designed to spend a considerable portion of their day (up to 18 hours) in social grazing. Throughout this time period a process of mental/emotional stability, social bonding, family/group cohesion and sense of self / belonging is continually being nurtured. This need for social/associative interaction is so great, that horses kept alone, (even those kept in open, freedom-based environments) are known to bond with an animal of a different species.

*This is a key factor in the human/equine relationship that we have overlooked in our 6,000 'rush to mount up.' It is also the cornerstone of an alternative paradigm that prevents of multitude of behavioral issues caused by our present day (Alpha theory) methods of 'training,' (and nullifies those already instilled by that same methodology).

2. The human psychopathological effects of solitary confinement become evident after just 30 days (and we are basically 'cave dwellers'). It is no small wonder that the psychological repercussions result in stereotypic behaviors such as: stall-kicking, weaving, pacing/box walking, cribbing/wind-sucking, incessant digging/pawing, repetitive whinnying/screaming, despondency, eating disorders, self-mutilation and wood-chewing. This does not take into account the discomfort and pain of excess acid when their stomachs are empty for long periods of time.

Horses salivate only when they are chewing and eating, (usually producing up to 30 quarts of saliva a day as they graze). The saliva acts as an acid buffer to neutralize the acid in their stomach. (The stomach acid is constantly being produced, even if the horse is not eating). Unchecked, this caustic acid acts as a strong irritant on the mucosal lining that literally 'eats it away,' (causing painful ulcerations/gastric ulcers).

*When on a long trail ride, (or anywhere of long duration without the horse being able to consume fibrous material) it would be beneficial, (compassionate/caring/understanding/wise) to allow your horse to occasionally have a few bites along the way, (instead of jerking the reins to 'teach him a lesson') when he snatches a bite of grass). He is only trying to alleviate the discomfort and pain caused by the excess acid burning his stomach. That additional acid burning is caused by the increased pressure in the abdomen, (as a direct result of exercise) that forces the acid levels further up into the more sensitive mucosal in the stomach. These areas are extremely sensitive and would not normally be exposed to the corrosive stomach acid.

*Your decision alleviate the discomfort and pain would depend on whether or not you wanted to prevent your horse from associating discomfort and pain with carrying you/mounted activity and whether you were dependent upon 'learned helplessness' and the Alpha Theory, (or sharing a 'herd of two within the herd' peer attachment type of bonded relationship with your horse).

3. Horses cannot usually experience REM sleep unless they are sleeping in the prone position. This restive state is essential for all mammals including ourselves. The first thing our doctor will tell us when we catch a cold or the flu is, "Drink lots of liquids and get 'plenty of rest.'" Social groups provide a sense of security/safety as one or more will 'stand guard' while the others sleep. This facilitates REM sleep and the desperately needed sequentially ensuing mental/emotional/physical healing. Lacking REM sleep, the physical, mental and emotional condition of the stalled horse cannot possibly compare with that of his freedom-based counterpart.

4. The anatomical design of the horse is a free-ranging lifestyle. The average distance of normal daily movement in a feral herd varies from 10 to 20 miles a day. The detrimental physiological effects of even limited confinement for an animal whose body was designed for that essential range of daily movement are beyond imagination. Healthy suspensory ligaments and hoof growth as well as adequate circulation to the lower legs would be the first to appreciably deteriorate. As a horse walks, it continuously regenerates the blood and fluids flowing in and out of tissues surrounding the bones of the hoof and legs. It cannot do this in a stall.

#5. Based on scientific evidence, the therapeutic benefits of regular exercise are well documented. Study after study has shown that it increases health and general well being. The evidence is clear, leaving no doubt that physical exercise has a positive effect on stress by calming the mind and relaxing the human body, (through the release of endorphins, the body's 'feel good hormones'). These molecules attach to special receptors in the brain and spinal cord to stop pain messages, and act as natural mood enhancers. From a strictly neurological standpoint, it takes no stretch of the imagination to conclude that, forced to endure solitary confinement/stalling, the domesticated horse is robbed of this intrinsic need to live a stress-free life.

When released from their cage, they understandably often exhibit abnormal, sometimes defiant/aggressive behavior. Yet they are more often than not admonished, (if not physically punished) for their behavior when set free from their cage.

For those who are under the false impression that 'turn out' for an hour a day is sufficient, I would ask them to perform one simple experiment:

Stand locked in your bathroom for twenty-three hours a day, (no window, no mail, no phone, no visitors, no Internet access, no cell phone, no outside stimuli/conversation, no radio, no T-V and no reading or writing material allowed). At the end of a week, you will be better able to understand a tiny fraction of what horses endures when they are stalled for extended periods of time.

#6. Given the horse physiologically requires exercise, (traveling 10 to 20 miles a day in their natural environment) it is no small wonder that solitary confinement/stalling for any period of time prevents optimum fitness, (while often leading to various respiratory, cardiovascular, musculature and physical ailments). Stocking up, arthritis, stereotypical behavior, despondency, weaving/box-walking, eating disorders, stall kicking, pawing, constant rubbing, chewing and cribbing are some but not all of the repercussions of 'stalling.' This does not take into account possible respiratory infections and diseases due to dust and the four main gases produced from decomposing manure, Hydrogen Sulfide, Methane, Ammonia, and Carbon Dioxide). In high concentrations, (as with no adequate ventilation) each of these gases pose a health threat to horses.

Understandably, horses may be stalled for protection from severe weather conditions, (or recuperation from illness or injury).

But there can be no other justifiable reason to stall a horse for extended periods of time.

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(IV.) ENVIRONMENTAL AND SOCIAL INSTABILITY

To further make the domesticated horse's world as insanely chaotic as possible, they are bounced from one environment to another. And if by chance they are left in a stable environment for any period of time, herd mates and preferred associates, (bonded horse buddies) are often lost or new additions are added. If bonding has occurred with any specific individual, the repercussions of separation anxiety and/or grief response can be severe and traumatic.

(Excerpt from article written by Dr. Kenneth L. Marcella, DVM:

"Veterinarians have become so aware of their special role in this potentially devastating event that some clinics and veterinary schools now have 'grief counselors' and there are many reference sources, support groups, and even "pet loss" chat rooms to help people deal with this trauma. But there is almost nothing written and virtually no research, surprisingly, dealing with the reaction of animals to the loss of a partner or close herd mate. Animal behaviorists caution that it is not always correct to think and speak anthropomorphically (giving human feelings and characteristics to animals) but owners and trainers feel that they can tell when a horse is feeling happy, playful, contented, angry, bored, tired, upset or any number of other emotions. And most veterinarians, even if they do not use these terms, recognize similar behavioral expressions. In cases like that of Ben and Doc, the surviving horse often shows signs of classical depression and, in the words of most of horse owners, acts sad.

There may be more science to the way animals seem to act, however, and Dr. Crowell-Davis, DVM, Ph.D. and board certified animal behaviorist at the University of Georgia College of Veterinary Medicine assures us that these interpretative evaluations of how animals "feel" in response to certain situations are fairly accurate. "The use of PET scans (positron emission tomography) provide researchers with an evaluation of mental states based on brain activity and neurochemical changes noted in response to specific stimuli," explains Dr. Crowell-Davis. A person is presented with a stimulus that causes them to be happy, for instance, and the PET scan records their pattern of brain activity and the chemical changes that occur in the brain during that time period. Additionally, certain drugs can be given that produce specific feelings and the resultant brain activity and chemistry can be recorded. "When animals are recorded showing the same patterns of brain activity and the same brain chemical changes that correspond to a particular human emotion or mood state," says Dr. Crowell-Davis, "it would not be logical of us to assume that they are not experiencing similar feelings". Based on how closely some horses correspond to the classical signs of clinical depression and on how intense the individual responses can be, the loss of a close companion is felt as sadness by horses and they can certainly express grief.

Anyone who has spent time around horses will tell you that they can be happy and pleased or angry and discontent. They do have emotions and they can certainly interact with their environment and feel things. When horses are separated or die, other horses close to them exhibit grief-like behavior, which can become excessive at times. Recognition of this phenomenon is important for equine veterinarians because clients will seek help in dealing with these situations. Being aware of 'grief loss' in horses and being willing to help treat these situations will allow you to help both horses and their owners. It is likely that we will eventually find that many behavioral and emotional states currently assigned only to humans, such as paranoia, schizophrenia, attention deficit disorders and many others are all found in horses. Their recognition, diagnosis and treatment will help improve life for many horses that are currently thought of as "un-trainable", "spooky", or simply "crazy". It actually may be far crazier to assume that these horses do not feel many of the same things that we do, and need treatment just as much."

Add to this the changeability of domesticated herds. It is no small wonder that we have 'behavioral problems and issues,' (and again chronic stress as well.)

If suddenly a tall well-built stranger barged into your house and sat down unannounced at your dinner table demanding you wait until he was finished eating, how would you greet him? What would be your first reaction? Would you experience doubt? Apprehension? Fear? Anger? Perhaps the two of you could move out to the front lawn and 'settle things,' (as is done in most 'new horse scenarios' in the horse world).

You would in all probability, experience an overabundance of stress.

So does your horse...

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(V.) UNINTENDED CONSEQUENCES of MOUNTED ACTIVITY

While rider induced lameness is an accepted possible cause of physical trauma/disability, we seem to forget that rider induced stress can be, (and probably is) not only much more common but can have deeper, more drastic effects.

Poor saddle fit, whipping to encourage forward motion, unnecessary harsh bits, indiscriminate use of spurs, (also never needed to instill forward motion) rider inexperience/imbalance, (uneven weight distribution at various gaits) and jerking on the reins for balance all lead to a situational pattern of discomfort, pain, uncertainty and a self-fulfilling prophecy of doom.

Perhaps one of the worst, (if not THE worst) travesties of our present day 'training' is the often heard complaint of a novice rider that their horse acts, (or will act) 'spooky' and nervous when riding, (given to jiggling/bolting and shying for 'no apparent reason').

*For additional causals, see "Suddenly Temperamental or Bucking" article.

"The mounted relationship can never be more harmonious and enjoyable for either party than the ground relationship." That is, if one shares a truly trusted, bonded relationship with their horse on the ground, the chances are much greater they will share that same level of intimacy, caring and intereliancy in their mounted activities.

Do these novice riders somehow miss the fact that their own nervousness, apprehension and lack of self-confidence is transmitted to their horse?

[http://www.ncbi.nlm.nih.gov/pubmed/19394879?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DiscoveryPanel.Pubmed_Discovery_RA&linkpos=2&log\\$=relatedarticles&logdbfrom=pubmed](http://www.ncbi.nlm.nih.gov/pubmed/19394879?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DiscoveryPanel.Pubmed_Discovery_RA&linkpos=2&log$=relatedarticles&logdbfrom=pubmed)

Linda Keeling, PhD, and colleagues at the Swedish University of Agricultural Sciences have determined that riders inadvertently DO communicate fear and anxiety to horses.

<http://www.bio-medicine.org/medicine-news/Horse-Heart-Coherence-May-Be-Key-To-Non-invasive-Stress-Detection-17417-1/>

"A horse's heart rhythms reflect their emotional state and respond to the emotional state of a nearby human, (mirroring a human's emotions) according to a pilot study conducted by Alliant International University Professor Ellen Gehrke and the Institute of HeartMath."

Simple logic and common sense would lead one to believe that a novice rider should prioritize developing an acceptable level of balance, muscular coordination and a solid, independent seat, (and in the process acquire more self-confidence) long BEFORE they mount up on their own horse, (especially so if the horse is a novice to being ridden). Hence the old adage, "Green horse and green rider makes for black and blue."

Yet this tragic, (buy 'em - break 'em - ride 'em) idiocy continues to pervade the horse world.

Typically in this scenario the horse is not physically conditioned making it doubly difficult for the horse, (and creating yet another negative experience associated with mounted activity).

And in the process of this potentially 'self-fulfilling prophecy of doom,' any/all mounted activity is viewed by the horse as a negative experience, (something to avoid at all costs). Failing that, and being forced to endure the emotional conflict, discomfort and pain, (as well as counterproductive emotional feedback from his rider) it is no wonder why the horse displays aversive/shying, bolting, spooking or runaways at an unknown or familiar source/stimuli and/or actually bucking to rid themselves of the discomfort, pain and apprehension/fear. Sadly, for most horses that do not have a rapport with their rider, (or have an uncaring, oblivious rider) it is the only means of communication the is allowed.

Which only adds to the stress the has already endured, (not counting the fact that the is forced into environments and situations he regards as insanely suicidal).

What a difference it could have been if the rider had an interest in giving their horse every possible opportunity to carry them as effortlessly and joyfully as possible, (and allowing them to be the horse they want, hope and expect him to be).

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(VI.) EQUINE ORTHODONTICS, TMJ and PROPRIOCEPTION

In recent years, a wide abyss has occurred between the traditional dental work that GP large animal vets perform by simply 'filing down the points' of a horse's teeth and recent advances in oral biomechanics and Equine Orthodontics.

There are two prominent leaders in this vital area, (TMJ) of equine care.

Spencer LaFlure

<http://advancedwholehorse.com/index.html>

Excerpt:

"Biomechanically speaking, the relationship of the anatomical alignment of the jaw to the body should be our goal. I proved in a thesis that the natural length and angle of incisors along with the restored biomechanical motion of the jaw will maintain or increase muscle mass in the body of the horse. Natural balance of the Equine mouth is more related to motion and mass than what we have been led to believe

*Of utmost importance to any horse owned is a video entitled:

"A horsemen's guide to Natural Balance Dentistry."

Maureen Rogers

<http://www.equinecraniosacral.com/articles/article2.html>

Excerpt:

"Horses rely on the proper function of the temporomandibular joint mechanism, or TMJ Mechanism, just like we do, if not more! The ability to move the jaw properly - side to side, up and down, forward and back - affects not only the ability to chew and digest food, but also affects the body's balance and biomechanics. Proper function of the TMJ Mechanism is vital to horse health.

Today, all horses are exposed to a variety of contributing factors that affect the proper movement of the jaw. Some of these factors include the wearing of certain types of bits or nosebands, eating out of hayracks, getting stuck between fence posts, undergoing various types of dental work, and lack of proper dental work. Due to these and other factors, horses are prone to the condition known as Temporomandibular Dysfunction, or TMD."

Additionally:

<http://www.holisticdentist.com/pdf/ddsquantified-fonder.pdf>

Dr. A. C. Fonder

Excerpt:

"The W. B. Saunder's Medical Dictionary defines a syndrome as a complex of symptoms; a set of symptoms which occur together; the sum of any morbid state.

Research has demonstrated that excessive dental distress routinely coexists with a pattern of chronic symptoms that are found throughout all systems of the body. These problems quite routinely normalize when the dental dysfunction is eliminated. Why?

There appears to exist a controlling relationship within the body that puts the dental system into a causative role of symptomatology, where a dysfunctioning dental occlusion creates ill-effects throughout many distant areas of the united body. This is termed the Dental Distress Syndrome.

Nearly half of the sensory and motor aspects of the brain are devoted to the dental area."

<http://www.fitcommerce.com/Blueprint/Page.aspx?pageId=85&tabindex=5>

Dr. Larry Lytle

"Proprioception is an important phenomenon to understand in the world of wellness. It is the body's natural defensive mechanism for saving itself from harm. It is not voluntary, but the immediate interaction between our brain and our involuntary response in our muscles. Many individuals may have detrimental effects to their body movement and posture as a result of poor proprioception leading to an imbalance of sympathetic over parasympathetic responses which places inordinate stressors on our system.

Amazingly, as embryos, our mouth is formed in conjunction with our brain and central nervous system, particularly our jaws and teeth. The key to many ailments may lie with proper alignment of jaw muscles to correct an erroneous proprioceptive response.

One thing that is known, the brain never forgets anything, including accidents, injury and other events which continue to negatively affect its' life.

Proprioception is defined stimulation to tissue in order for the body to protect itself. Much is known about proprioception in the feet and hands. If you are barefoot and step on broken glass, you will immediately lift your foot. The muscles in one leg tighten to lift the foot and the muscles in the other leg splint to support your weight. Or, if you touch an electrical wire, you instantly, without thinking, jerk your hand away. These are examples of how the voluntary muscles are involuntarily controlled through proprioception via the muscles and ligaments. When muscles are fatigued from constant over use, signals are sent to the brain to tighten up more and the vicious circle is repeated.

The delicate proprioception between the lower jaw and upper skull has a great deal to do with overall health or lack of it. Proprioception affects visual interpretations, sensory interpretations that deal with touch, taste, sound, and speech as well as motor functions that deal with all movements of the body. Even the length of the stride is controlled by proprioception to the brain. Over 50% of the biofeedback to the brain originates in the 'dental muscles' that are called upon constantly to correct the 'trapped mandible' syndrome."

*In short, the need for the horse's jaws to effortlessly move up and down, side to side, and back and forth will affect their entire body, (and attitude as well) is much greater than just simple mastication.

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(VII.) Stress.

A very brief look at 'chronic stress.'

(Excerpt)

Stress 101 By I. Michael Borkin, N.M.D. and William P. Stuppy, M.D.

A CONCISE COURSE IN UNDERSTANDING AND MANAGING THE NATION'S NUMBER ONE KILLER

All living creatures respond to stress utilizing a system known as the "adrenal response," commonly referred to as the "fight/flight mechanism." This mechanism has been genetically embedded in animals for hundreds of millions of years. Fight/flight, a series of chemical events that prepare your body to respond to an attack, is our most important survival mechanism. It has been passed down, virtually unchanged from our early ancestors, to present-day man. What has changed is our environment and society. We have produced a culture of chronic stress. Instead of confronting the occasional saber-toothed tiger, we are now under attack 24 hours a day. Job pressures, noise and toxic pollution, dizzyingly rapid changes in the fabric of our society, and a barrage of invasive advertising and negative media messages charge at us.

This chronic stress causes our bodies to overproduce chemical and electrical messages, disrupting our natural ability to regain balance, or homeostasis. Our body keeps its hormone functions in a constant state of emergency.

Left unresolved, chronic stress results in serious health conditions. Stress, in fact, is involved to some extent in all injury, illness, disability, and death.

***Without any stretch of logic, one can easily understand the same holds true for the domesticated horse.**

(Excerpt)

Serotonin and Hippocampal Neurogenesis

Elizabeth Gould, Ph.D.

~ ABSTRACT ~

The dentate gyrus continues to produce new granule neurons well into adulthood. This has been demonstrated for many mammalian species, from rodents to primates. The proliferation of granule cell precursors can be suppressed by stressful experiences, presumably via adrenal steroids. Recent evidence suggests that serotonin can enhance the production of new neurons via activation of the 5HT1A receptor. These results present the possibility that the inhibitory effects of stress on granule cell production may be prevented by 5HT1A receptor agonists.

<http://www.wellesley.edu/Biology/Concepts/Html/neurogenesiswhat.html>

"Thus stress, (especially chronic stress) decreases a potentially healthy neurogenesis. On going neurogenesis is thought to be an important mechanism underlying neuronal plasticity, enabling organisms, (including horses and humans) to adapt to environmental changes and influencing learning and memory throughout life."

*While few if any equestrians have a remote interest delving into neuroscience, the above indicates that a healthy brain and learning, (neuroplasticity) is greatly diminished when chronic stress is involved in an animal's life, (and especially so in early life).

Adding to this the horse's olfactory sense, (which is beyond any doubt the most extraordinary one the horse is most dependent upon for survival). Estimates vary as to how much greater a horse's sense of smell is than a human's from several hundred to thousands of times greater. In many cases, it is not known whether these estimates are exponential or linear, but it is safe to say that the horse's olfactory sense is very much, (if not thousands of times) greater than ours. In addition, the horse carries around his own laboratory to instantly analyze and identify different pheromones. It is called the Organ of Jacobson (or Vomeronasal organ.)

While present day science has not conclusively proven, (nor disproven) if the horse can detect human pheromones, (which would indicate our intent before we said or did anything to the horse) the success of air scent rescue horses must certainly be considered in making that determination.

They hear things that we cannot hear, see things we cannot see, smell things we could never smell, and sense things we could never possibly be aware of, no matter how hard we tried, (perhaps something to consider the next time someone's horse 'spooks at nothing').

The following published works offer a more detailed explanation:

<http://www.gla.ac.uk/external/EBF/uhcc7.html>

Dr. Francis L. Burton

<http://www.thehorse.com/ViewArticle.aspx?ID=6016>

Dr. Rickye Heffner

Being so sensitive, in so many areas, it is no small wonder that they more often than not reject our intentions, (and in the process, suffer the results of our lack of understanding and resulting the often 'unintended consequences').

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VIII. Conclusion.

There are of course, numerous other oversights horse owners in general seem to be oblivious to that confuse, frustrate and confound the domesticated horse.

#1. Rationing their feed and hay/grass intake to once or twice a day.

#2. Use a piece of metal in their mouth that inflicts pain to control and 'train them' when all that was really needed was establishing a bonded relationship.

#3. The use of spurs to jab them in the sides to 'make them go' when in reality, true 'forward impulsion' and a desire to please comes from within the horse's heart and spirit.

#4. Given the horse's intrinsic survival use of their extremely keen olfactory senses, altering our scent from day to day with various soaps, deodorants, hair sprays, shampoos and body powder cannot possibly evoke any sense of

#5. Though not as severe, this would also hold true for changing, our body covering texture and color and even 'take some off or put something different on' during the day.

#6. Certainly 'baring our teeth' when we're really happy, unlike other predators, and even horses, that bare their teeth as an aggressive/hostile warning or when fighting or attacking could be considered 'sending mixed messages.'

To the average person, it would seem that the horse world in general has needlessly done everything in their power to make the domesticated 's life as chaotic and stressful as possible. While this is evidently true, it is doubtful that it is done maliciously. Indeed, most horse owners love their horse and want to do the best they possibly can for them.

Q. Is there anything we can do to give our horse a tranquil domesticated life, and allow them to regard both ourselves and our mounted activities with joy instead of gloom and despair?

A. Evidently, quite a bit.

But that will only happen when concerned, caring horse owners realize how tradition and a lack of understanding have 'stacked the deck' against the domestic horse, (making it difficult if not impossible for them to be the horse we want, hope, or expect him to be).

And when we decide to reap the rewards of placing the physical, emotional and spiritual welfare of our horse above all else.

Actually, when you stop to think about it, why wouldn't any concerned, caring horse owner choose to do so?

Every horse that was ever born, was born a perfect horse with the potential to be one of the most forthright, caring animals on the face of the earth.

Yet as a whole, the horse world continues to ignore the intrinsic needs of the domesticated horse and, to 'add insult to injury,' then blame the horse for their own lack of knowledge, understanding and caring.

There is a small but ever-growing group of caring, concerned horse owners who enjoy the countless rewards and benefits of winning their horse's heart and allowing him to 'be all that he can be.'

Those horse owners choosing to make their horse's life as pleasant, stress-free and enjoyable as possible, (and in the process share the most intimate, bonded relationship possible with their horse) are invited to join us.

<http://friendshiptraining.org/>

When will the horse world in general succumb to logic and common sense?

Only when you the reader, make it so.

“Those who overcome by force, overcome but half their foe.”
~ Milton ~

“The truth that makes men free is for the most part,
the truth which men prefer not to hear.”
~ Herbert Agar ~