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It is not our surmise alone that a multitude of modern lodging techniques thought of as “right” or at least popular and visible are really quite harmful to horses both physically and mentally. What is common is not necessarily wise.

Fencing

Horses evolved on the Eurasian steppes traveling dozens of miles daily over thousands of acres. Most modern ranches are only in the hundreds of acres while most single family holdings are in the dozens at most with boarding and training barns being in the tens if lucky. And each of these require fencing; safe, secure fencing.

Larger acreages frequently prefer barbed wire in order to be affordable. However “affordable” can be incredibly expensive when a horse runs into barbed wire after being spooked by dogs, coyotes, bears, mountain lions, or whatever and the owner must call the vet for extensive emergency surgery or heart and wallet breaking euthanasia. Likewise many smaller acreages think that electric is the way to go and it may be, but NOT with thin wire which cannot be seen by a horse and which can have the same devastating effect as barbed wire. Some subdivisions insist on shiny white boards or modern vinyl fencing which may look quite lovely but may not be high enough for horses to stay in (remember that horses can jump!) or they are easily broken through, especially those fences with boards/poles on the *outside* or vinyl with only a half inch overlap to hold them in place. Others try to get by with lightweight field fencing on T-posts with a top strand of electric to keep the horses back. This may be OK until a neighbor’s horse gets loose, goes at it over that fence with yours and suddenly you find your fence bent to the ground with no horse in sight except for the one impaled on a T-post. Essentially, horses and fencing are like oil and water: they simply do not mix well or easily.

Over the years we have found that perimeter pasture fencing should be varmint-proof, at least 54” high, solid enough to not be easily breached and visible to a horse whose sight is quite different than yours or your dog’s. We think the most cost-effective way to accomplish this is by sinking wooden or pipe posts, affixing heavy 4 x 12’ cattle panels to the *inside* and topping them off with wide white electric banding. Cheap, no; cost effective, yes. Safe, yes; secure, yes. It can be beautified if you wish, by placing boards or poles on the outside in the middle and at the top or, to be even safer, on the inside between the wire and the posts.

Cross-fencing larger paddocks can be relatively easily accomplished with the same wide white electric banding, from 1- 3 rows depending on paddock size and what is to be contained, mounted on T-posts which have rubber “toppers” on them. This type of fencing can then be easily moved if necessary. More permanent cross-fencing can be accomplished by using the wood/pipe posts and more strands of electric banding or essentially doing it the same way as suggested for your perimeter fencing.

Runs, corrals, etc. need to be heavier due to the increased jostling fencing gets as areas become smaller. We advise again, the wood/pipe posts and 5 x 10’ pipe (not metal

tubing which is easily bent) affixed with wire whose ends are tucked neatly under. Pipe panels longer than 10’ tend to be too heavy to deal with effectively and tubing panels are way too weak in our estimation. We suggest panels over “continuous pipe fencing” since that can be very difficult for most horse owners to deal with although it is excellent fencing and can look extremely nice. Any pipe is far safer in the long run than any wood boards or poles could be.

Of course these are all generalities. Specifics depend on the actual size and use of the individual areas.

Stallions need confinement behind a minimum 6’ fence; we have always held our stallions in long, narrow paddocks about 30 x 120’ upwind of mares and separated from other horses by a 12’ alleyway. This keeps the stallions safe and secure yet able to see other horses thus be able to be a part of the herd and able to exercise themselves fully. We have seen some awesome stallion enclosures made entirely of chain link fencing but that looks too much like a zoo cage for us to feel OK about it!

We also provided very generous broodmare/foaling paddocks of 40 x 140’ with no alley way between. After using pasture situations for many years, we found our paddocks allowed mares to have a herd sense but with total safety for both mare and foal and enabled us to provide more adequately for individual feeding needs. They also provided the foal plenty of natural ground upon which to run and play thus developing strong bones and totally safe weaning structures due to our design of an inner paneled/gated cross-fence behind the shelter. Weanlings went to their new homes from their paddocks and dry mares went out into the pasture; bred mares remained in their paddocks safe from kicking yet free for plenty of socialization and exercise. When we retired from breeding, we split the brood paddocks in half the long way providing fantastic runs for boarded riding horses.

Our round ring and arena are free-standing pipe panels (squared off so no legs or necks can get caught between) since an arc holds its own shape and the horses using such areas are under control.

Shelters

For herd animals dependent upon a buddy system, stalls must seem to horses to be tortuous prison isolation cells.

Nice barns have solid wood up only five feet and wire mesh above so horses can see each other a bit and get a little air circulation but unfortunately for the horse, it has to raise it’s head over whither height to be able to interact with its neighbors. This “browsing” position is not natural for a horse and can cause cervical vertebral displacement affecting the thyroid, respiratory difficulties, and even hoof structure challenges due to such unnatural posture maintained for periods of time.

Nice barns also provide 12 x 12’ stalls instead of the more common 10 x 10’ ones. However neither size is sufficient for any horse larger than a small pony; in fact they are akin to leaving a dog in a shipping crate all day long or keeping a person locked in a closet. In fact for an average 1,000#

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A Lifetime of Soundness: Preface

By Hiltrud Strasser, DVM

Since the dawn of human history, the horse has been of use to man. In the stone age, it was a source of food; around 5000 BC in Eurasia, it first became domesticated. From there, the use of the horse as beast of burden, draft animal, and later as riding animal, has spread across the world. In more recent history, man began to selectively breed horses for certain characteristics which were of importance in a given time or place.

From this long, shared history, one would assume that the horse and all its needs are so well known to man that, in his care, it should have a better, healthier, longer life than it ever could have in the wild.

However, the stark reality is precisely the opposite. Horses in the care of man have a life expectancy that is for the most part only a fraction of that of their wild-living counterparts. Instead of living into its 30s (or longer!) many a domestic horse's life is cut short in its prime. The most common reason: problems of the locomotor organs, in other words: Lameness.

These facts should be cause for concern, and for research into what it is that humans are doing wrong to so drastically reduce a horse's lifespan.

It is important to realize that the horse living in the Ice Age, the present-day wild horse, and the high-performance breeds of today are all anatomically, physiologically, and psychologically alike. This means that mustang, Hannoverian, Quarterhorse, Thoroughbred, miniature, and shire all have the same basic biological requirements for health and survival. If these basic needs are met, the horse has the foundation for health, long life, and soundness. In how far these needs are met is, for the domestic horse, decided by the human.

Obviously, one of the major factors influencing the way horses are kept today is the comfort and convenience of their owners. The box stalls, blankets and horseshoes which many of us consider perfectly normal (and even necessary!) are geared solely toward our own comfort, ease and convenience. Their harmful effects on the horse's health are not only conveniently forgotten, but at times even fervently denied. However, the fact that the domestic horse is not only frequently afflicted by various health problems, but also falls so tragically short of its natural lifespan, is stark testimony to the truth that its basic needs for survival go largely unmet in the hands of man.

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animal, let alone the larger TB's and WB's, a stall should be at a minimum 16 x 16' with as much natural light and ventilation as possible and no solid partitions over 3' high.

Nice barns provide runs off the stall and the door is left open all the time. This is a step in the right direction but to call a 10 x 20' pen a *run* is delusional. We call them back

porches which is what they are. They provide some sort of view, air and minimal interaction with their neighbors, but exercise? ... a run? We do not think so.

We only had one box stall in our facility: a 16 x 24' pipe "emergency" enclosure fully open to the south with the east being open to the balance of the large shed within which it was built. All other shelters, including for our stallions and broodmares (the pastures have large loafing sheds), are two-sided run-ins, 12 x 16' and 16' high in front with no drop down to catch a rearing horse's head. For visiting mares, and now for boarders, these are tucked to the front of each 20 x 60' run which backs onto a shared turn-out through which they rotate. They also have a panel/gate cross-fence close to the shelter for a smaller confinement area if needed.

With standard stalling practices, we are essentially demanding that a prey animal which evolved on the open steppes where it could see for miles, go into an enclosed space where it has no escape—sort of like right into the lion's den! We project that they must feel cozy in a stall since we predators like to den, but to a horse, it is the antithesis of what every fiber of their being is telling them to do.

Surfacing

The Eurasian steppes have a relatively hard, highly mineralized soil upon which rocks abound. Equine hooves and legs evolved to handle that hard terrain and require it to grow properly and to, in effect, trim their feet themselves. Foals come out running; at least they have to within a relatively short time of birth or risk being someone's lunch. The pounding stress of running at will on hard ground actually stimulates bone density along with hoof growth.

Nice barns offer cushy surfaces sometimes even with rubber mats in stalls and lots of soft bedding. Rings and arenas have inches of sand and perhaps rubber particles to make them comfy soft and comfortable for our lovely horses. Owners simply cannot understand why their horses have so very many hoof and leg problems.

The surfacing throughout our facility is natural ground with some structural fill under the shelters and any area which may become slick. Structural fill has the ability to drain like sand but with a much more firm surface; and we do not put it deep enough to cause strain. We never use bedding since horses prefer open ground for that but for newborns we would throw in an opened, fluffed bale of grass hay both under the shelter and another out in the open for totally dry places for the baby to lay. Since they eat their bedding, the good grass hay provided safe forage. Sawdust has a tendency to become terribly acidic, thus able to destroy horses' hooves.

Turnout

Horses in nature rarely stop moving; they will easily travel 20-30 miles per day mostly just ambling along while grazing but with a few sprints and play time thrown in for good measure.

Nice barns provide an hour or so turnout per day per horse frequently with others which may or may not be OK. Since natural horses live in a highly structured pecking order, it is unwise to put strange horses together willy-nilly; way too many very nasty, and sometimes fatal, accidents have occurred with such lack of forethought, especially with shod horses. Unless the horses are used to each other, we believe only rota-

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tional turn-out should be utilized. With our visiting mares, most were not here long enough to form pecking order bonds so we never put strange mares in together.

One true horror story is that some folks had a bred mare requiring close attention due to a rare situation where the foal might need an immediate transfusion. So they made “foaling out” arrangements at a close-by big stud farm that had full time attendants and a vet on the premises. The mare was to have her own stall and run with 24 hr/day camera surveillance. When they visited two days later, they found the mare not in her special quarters for which they had paid, but in a crowded corral (not paddock) bleeding profusely from a gaping wound right next to her vagina; she had been kicked by a shod mare. The owners called us frantically (our stud had bred the mare) and after we succeeded in calming them down, made arrangements for the mare to be taken home with a wonderful vet from CSU to see to her injury and to be in foaling attendance. This case turned out all right and the big stud farm ended up paying all attendant vet bills since it had been due to “someone’s” negligence that the mare had been put into that corral, but that is what unfamiliar horses can do to each other. That and far worse.

As for an hour or two per day turnout, horses can sometimes over-exercise themselves when turned out from non-movement in close confinement. This of course can lead to muscle/tendon/ligament damage. It is far better to let them have much more regular turn out time so they can move their bodies as nature intended. Standing in stalls, especially following hard work-outs, leads to stocking up: the blood vessels dilate to cool the horse down but if it’s standing still, gravity will pool that fluid in the legs. Standing in stalls can also lead to all sorts of hoof and mental problems.

Watering

Mother Nature waters horses via rivers, creeks, ponds, etc. What those have in common is that they are ground level and the entire front end of the horse, at least, must step into the water in order to drink. This daily moisture is ideal for hooves.

Nice barns have lovely and expensive little automatic waterers in the stall corners. We had automatic waterers but ripped them out as we could not monitor consumption nor could the horses sink their muzzles in and play like most enjoy doing. Unfortunately we have never been able to figure out how to sink a trough into the ground and still be able to clean it! Some individuals have placed their troughs on a bordered gravel pit and deliberately overfill the troughs in order to get a somewhat similar result as a creek bed.

Feeding

All equines are grazers meaning they nibble off the ground. Browsers will chew tree branches, and horses will occasionally do so, however, they are primarily grazers who need to eat 23 out of every 24 hrs. They have relatively small stomachs and large guts which evolved to utilize this mode of feeding perfectly.

Nice barns have handsome raised feeders affixed to the wall so everything stays clean when they feed a “flake” or two of hay and a gallon of grain a couple of times a day. Unfortunately raised feeders are very hard on equine necks. Constant twisting and raising can result not only in cervical vertebral displacement and even thyroid problems but also respira-

tory problems including guttural pouch infections. Another problem with high feeding is that it can lead to overdevelopment of the muscles on the underside of the neck and a shortening of the top side ones resulting in a tendency toward ewe necks. And when the gut is geared to constant roughage flowing through, to starve between “flakes” can only lead to stress and perhaps colic. Overloading grain into a system totally unprepared for it can also cause grave digestive problems in the long run (please see our Grain article).

We have always fed free choice grass hay on the ground with no more than 2 qts (3#) grain in a ground-level bucket or small trough. For those gasping in horror at horses eating sand and dirt, we would like to point out that equine lips are darn near prehensile and can pick up one little strand of hay or grain particle without touching anything else—if it wants to. Many horses eat dirt or sand in a vain search for the

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Importance of Habitat

By Jaime Jackson, *The Natural Horse*

... My advice to horse owners interested in developing the natural horse in their own horses is some rather unconventional changes in barnyard management:

First, tear down the stalls and fences and let the horses run about and mingle. Let them argue and fight—horses love to fight—but they like even more to work things out. Contour the pasture to get rid of all the flat spots. Then spread rocks of all sizes and shapes across the up-and-down pasture—and if the horse does not have to put its nose on the ground during the first day to see where it is going, then keep tossing truckloads around until it does. Next, abandon the use of feed mangers and feed the horses on the ground. Do not worry about them getting worms; in fact stop using paste wormers altogether. Pull the watering contraptions down off the wall and kick the water troughs over, and then water the horses at ground level so they will use their big, strong necks; make sure they have to stand in the mud if they want to drink. Pull off the horseshoes—especially the fashionable ones with the “bars,” and ride the horse barefoot until it is lean and muscular. If you want the hooves to be really tough when you are through, stop washing them in soap and water every day, stop painting them with “blackout,” and throw away the hoof dressings. . . .

The difference between feral and domestic horses lies not in their respective musculoskeletal frameworks or even in their hooves; these are essentially the same. Nor does it stem from their mental capacities; both animals are equally intelligent. Nor can it be attributed to the lay of the land, for the modifications made by people, especially in rugged ranch country are negligible. The difference lies in how the horses are able to use what nature naturally endowed them with—their minds and bodies. “Respond to my rhythms,” speaks Nature, “and I will help you to become what you are intended to be.”

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minerals it requires but which are sadly lacking in our modern soils and so cannot possibly be in the feed grown on them. To deal with that, we offer all horses the **DYNAMITE®** four different free choice minerals (**Natural Trace Mineral Salt** included) in powder form to pick from as they choose. Boarders who have come in and started chewing the place down stopped as their bodies became optimally mineralized. Other boarders who used to have frequent sand colic no longer came up with that in spite of being fed on the ground; we surmise they no longer needed the silica since it was being provided in a safer way. With any feeding, the horse's poll should never have to be higher than the withers. Another warning is that many of the black feeding tubs use ethoxyquin in the rubberizing process; we have chosen to avoid them.

Blanketing

Nature has equipped horses with a natural blanketing system which functions admirably from the desert sands to the frigid steppes. The skin of any mammal is its largest organ of elimination, in addition to acting as a protective barrier to internal structures, and needs freedom to perform its function adequately. In the wild, horses (*"which get chilled about twenty times harder than a human"* Strasser), grow a thicker, more insulating coat. As temperatures drop, the individual hairs raise forming air pockets much like the down on a duck while blood vessels constrict to conserve core body temperature. Movement and shivering actually help the horse to activate this normal function. Conversely, in hot temperatures, thin summer hair lays flat while blood vessels dilate to radiate off excess warmth and cooling blood circulating to inner organs. Horses also sweat, as do humans, to help cool overwarm skin and they stop sweating when their internal temperature is correct. This sweat must then dry relatively quickly in order for the horse to not "undercool" which is why natural horses will find the breeziest spot they can to air dry.

Nice barns offer to blanket your horses for you with a light fly sheet in the summer and a heavier blanket in the winter; of course the exterior temperature may not even get below freezing but because these are show horses, they must have a slick coat. And then they go to turn out, get chilled either because the blanket is now off and they are too slick or the blanket is still on and they cannot fluff their coats to dry off the sweat garnered from running around and playing or the because their bellies and butts are still exposed (that's where some large veins are) AND some areas, especially bellies, are also in a "show" clip.

Rather than interfering with the horse's natural process because of human projection or ego, it is far better to allow their own systems to perform their jobs. We have never blanketed anything in forty years no matter the climate and have never had a snotty nose let alone a sick horse. One mare we bought had been cared for lovingly with blanket, nightly stalling and daily corral turn out; but she had a fungus along her girth line. When she came to us, we turned her out into her paddock and a few days later we had our first blizzard. The previous owner was quite concerned about the horse not getting blanketed; however the mare not only did spectacularly, but the fungus disappeared to never return. Of course she had free choice grass hay plus the entire **DYNAMITE®** Program, but with 2 inches of ice on her back, she had one day of a clear, runny nose and then nothing but glowing health. We

have had non-show boarders who blanket their horses as soon as the temp gets below 40°F and fly sheet them constantly every summer. Guess whose horses have continual runny/snotty noses and are frequently otherwise ill?

And, by the way, leg wraps also are unnecessary and potentially harmful. Essentially they disturb the normal functioning of the circulation and lymph drainage. Far more important than wraps is the ability of the horse to move so fluids will not pool.

Grooming

Grooming tools for natural horses are simple: teeth (their own or their buddy's), trees to rub against and a roll on the tundra.

Nice barns offer loads of outlets for all those clippers to make those show patterns ostensibly so the horse won't sweat too much when working out. They also clip all that nasty hair out of ears, off muzzles and even around the eyes so the baby oil can shine the skin properly.

Hair is within the ears to stop flying pests from penetrating into the ear canal. At most, very hairy ears can be clipped by folding the ear gently in your hand and removing only what shows outside the fold. Muzzle hairs orient a horse in space since their eyes cannot look down. Removing those is like putting a blindfold on a human. Long hair around the eyes are called eyelashes and again help to stop flying pests from penetrating directly into the eye.

Nice barns have vacuum cleaners for horses in order to pull off excessive dust and dirt and lots of wash areas with hot water taps so horses can be washed daily after being ridden. Well, the vacuums can be a nice touch! But frequent washing even with plain water let alone harsh detergent/chemicalized shampoos (try **DYNAMITE® All Natural Shampoo** instead), can reverse the horse's skin pH balance leaving it wide open for parasites and just plain unhealthiness. Actually washing should occur only lightly when bodily fluids need to be removed for health concerns and the infrequent bath for special occasions. Of course show horses need to shine like the sun and most horses on the full **DYNAMITE®** Program do! Their owners tell us to become show ready all they have to do is a quick dusting (or vacuuming) and they are ready to go. Most people think we groom our horses daily because they have such a shine to them. Not so; they get groomed once a year for mane and tail trimming whether they need it or not!

Same goes for hoof dressings. The best hoof dressing in the world is ingested minerals and movement. All the creams, oils and pastes will do is to again stop the normal uptake of fluid from the environment and hold in heat and toxins trying to get out. We have never used hoof dressings and the hooves on our horses are as strong and pliable as possible.

Conclusion

There is no way that most modern, domestic horses can be kept in truly natural settings except perhaps on very large ranches. But it does behoove all of us to provide as close to that as we possibly can. Also, facility designs must be in keeping with the owner's fiscal resources while still respecting the horse's physiological, emotional and safety needs. In order to know those needs, we must open to education rather than just go along with what is popular regardless of whether or not it is really good for our horses. Let us try to modify human desires to be more respectful of equine requirements. ■