



EQUINE HEALTH UPDATE

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Tail Alterations: An Unnecessary and Dangerous Procedure

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In recent years, equine welfare activists have shed light on serious issues in the horse world, from soring in Tennessee Walking Horses, to illicit drug use in racehorses, and the controversial presence of carriage horses in Central Park in New York City. While great strides have been made in improving the health and well-being of animals of these breeds and disciplines, there remains an alarming numbers of practices that occur with frightening frequency in many other sectors of the horse industry. Despite the tail being one of the areas of the horse that is frequently altered to enhance appearance of the animal, practices that change the function and position of the tail are commonly overlooked in welfare discussions. Tail carriage is something that varies dramatically from breed to breed, from the low, quiet carriage of the Quarter Horse to the long flowing upright carriage of the Saddlebred and other gaited breeds. Unfortunately, many of these animals have had procedures performed that alter the way that they hold their tails, and in many cases affect the ability of the animal to use its tail.

Practices that alter tail carriage and function are strongly opposed by many breed associations and groups of veterinary professionals, including the American College of Veterinary Internal Medicine (ACVIM) Large Animal Internal Medicine (LAIM) specialists, and the American Association of Equine Practitioners (AAEP). These procedures include blocking, nicking and docking. Blocking is defined by the American Veterinary Medical Association (AVMA) as “numbing the tail to cause it to hang limply,” whereas nicking is “cutting tail tendons to cause an elevated carriage of the tail.” Docking involves amputation of the distal bony part of a horse’s tail, and is generally performed in driving horses. Unfortunately, these procedures are viewed by many competitors as a necessity for high level competition.



Paint horse with permanently paralyzed tail with abnormal tail-carriage from previous tail alteration. Courtesy of W. Harper.

Perhaps the most dangerous of these procedures is the cruel and potentially life-threatening administration of epidural or paravertebral alcohol blocks to create the appearance of a quiet, relaxed tail. Colloquially known as “tail blocking,” this practice is most often performed in horses in western disciplines, such as western pleasure or reining, where animals are penalized in the show ring for wringing of the tail, excessive side to side movement of the tail, or for holding the tail in an upwards position. Although it is most frequently performed in Western performance breeds, other breeds have also been subjected to this procedure.

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Tail Alterations *(continued from cover)*

Blocking the tail is not the same as blocking a joint, a procedure done frequently during lameness examinations. A joint block involves sterile preparation of the site of interest, and injection of sterile local anesthetic, such as lidocaine or mepivacaine, into a joint by a licensed veterinarian. These blocks are performed to help determine the cause of lameness, last for a few hours at maximum, and have no long-term effects. Conversely, tail blocking can be performed by anyone, often without full knowledge of the potential consequences of the procedure or consent of the owner. The technique of blocking a tail is crude and involves blindly injecting ethanol along either side of the tail bone near the base of the tail and affects the function of the nerves that activate the muscles controlling movement. The effects of the “block” last approximately 4-6 months in most horses, but the response depends on numerous factors; including the volume and location injected, how far or to what tissues the alcohol eventually migrates and the variable response each horse has to the procedure.

Tail blocking is not taught in veterinary schools, as it is considered a cosmetic procedure and provides no health or medical benefit to the horse, thus any individual who performs them has likely not had any credible training in the procedure, and may have minimal knowledge of the anatomy and function of the tail. Though there are isolated cases of veterinarians performing this procedure, it is not condoned by the veterinary profession and could result in a malpractice suit against a veterinarian if it can be proven that the horse’s health was compromised as a direct result of the procedure. The AVMA endorses the AAEP’s position statement opposing any alteration of the tail of the horse for cosmetic or competitive purposes.

Since the practice of blocking tails is against the rules of most major show and breed organizations there are no clear guidelines or data available on what exactly consists of a “block,” how it is to be administered, and the rate of complications. Many horse owners are encouraged by their trainers to have this procedure performed on their horse with no idea of how devastating the results could be. In a discussion on an equine blog, one individual stated “My trainer made it sound like it was nothing, like people do it all the time. She was like before the show I think we should switch to aluminum shoes and get his tail blocked. Call the farrier and vet won’t you?” Sadly, this is a sentiment that has been echoed time and again by horse owners.

Many trainers and exhibitors believe that a block still allows an animal to move its tail side to side, thus allowing them to still use the tail to swish at flies, and making the procedure acceptable in the eyes of many individuals. While a few animals may retain this function, many do not and suffer continuously as a result. As is highlighted by the earlier quote, some trainers lead their clients to believe that getting the horse’s tail blocked is as necessary and routine as having the animal’s feet trimmed or teeth floated. Blog posts from internet searches on tail blocks cite a less than 1% complication rate from the procedure, or claim that if a block is done “right” there are no real adverse effects aside from the initial discomfort of the injection. Unfortunately, as with any unregulated and inhumane practice, there is an assortment of negative results that develop from alcohol injections into the tail, likely with a far higher frequency than 1%. While some blocks may “only” lead to

a horse that is unable to completely elevate its tail, there are far more serious consequences that can leave the animal permanently disfigured, unrideable, or dead.

Horses that have had their tails blocked often develop white hairs at the site of the injections, a tell-tale sign that the tail of that animal should be looked at more closely. There is no health benefit to a horse to have its tail blocked. The tail of a horse that has been “blocked” or “deadened” cannot be lifted above the horizontal plane. While the pain of the alcohol and the injection are temporary, one must still realize that the very act of injecting alcohol into areas surrounding the tail is painful, inhumane, and unnecessary. Once the burning sensation of the alcohol has dissipated, far more serious conditions can arise. Abscesses can readily develop at the site of the injection since these injections are unlikely to have been sterilely conducted. Inoculation of bacteria from the environment, such as *Clostridium* species, can occur and ultimately lead to death of the affected muscle groups, and can ultimately be fatal. The nerves and muscles that control the horse’s ability to move their tail up, down, and side to side are intimately associated with the nerves that control the ability to urinate and defecate, critical functions required in all animals. Alcohol, once injected into the horse, can also diffuse and spread through the tissues and can reach parts of the spinal cord and spinal nerves that may also control movement of the horse’s hind limbs, causing neurologic deficits or even paralysis.

Multiple cases have been described and published in the veterinary literature describing adverse effects of tail blocking procedures. Documented complications include permanent nerve damage that leaves a horse unable to completely empty its bladder or rectum, and invasion of the spinal canal and surrounding structures with bacteria or alcohol. Chronic stasis of urine within the bladder can lead to bladder infections, and ascending infections of the kidney. Horses that are unable to defecate are likely to develop impaction colic that is difficult or impossible to permanently resolve. Animals with chronic urinary or fecal incontinence are often subjected to euthanasia because of the level of management that they require, or due to the severity of colic that may develop secondary to the tail being blocked and defecation impeded. Infection of the vertebral bodies or spinal canal can lead to severe ataxia and pain, making animals unable to move normally and making them a danger to themselves and their handlers. One must consider if the horse’s ability to perform these most basic functions is an even trade for the appearance of a quiet tail in the show ring.

Testing protocols for horses suspected of having a blocked tail involve thorough physical examination of the tail and surrounding structures, assessment of the animal’s ability to move the tail, and application of specialized electro-diagnostic tests. When the anus of a horse with a normal, unaltered tail is massaged, the horse should lift the tail up above the horizontal plane, and many will lift the tail up into a vertical position. Musculature of the tails should be symmetrical over the entire tail, without presence of dimples or asymmetry. The muscles around the tail head should likewise be symmetrical and free of divots and areas of scar tissue. Additionally, when a horse tries to raise its tail when blocked, the tail will take on a concave arced appearance instead of the normal convex appearance.

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Rectal Tears in Horses Happen

What You Need to Know About Them

By Ava Nowak, DVM Student (Class of 2015)
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Rectal tears are unfortunately an inherent risk associated with rectal examination of horses. While rectal tears can be a complication, the amount of knowledge gained by performing a rectal exam outweighs the risk when proper precautions are taken. Lots of information can be gained by examining a colicky horse by rectal palpation. For example—assessing prognosis and determining if surgery is necessary or not—these are major decisions for the horse. Also with breeding soundness examinations, rectal examination can provide accurate information on where a mare is in her estrous cycle and when is the best time to breed. The risk of causing a rectal tear should not be the reason to skip performing a rectal examination as these risks can be minimized for the examination.

How rectal tears occur:

There are a variety of causes with the most common being iatrogenic trauma to the rectum. This means during a rectal examination, as the rectum contracts around the vet's hand or arm or rectal probe, the rectum tears. It can also, although much less commonly, be caused by penetration of the rectal wall by fingertips.

Other causes include parturition (delivering a foal) or dystocia (malpositioning of the foal during birth) leading to tears, breeding mishaps (such as a stallion accidentally penetrating the mare's rectum during breeding) and trauma.

Which horses are more at risk:

Some risk factors have been identified with rectal tears. Breeds such as Arabian horses and miniature horses have been shown at higher risk due to restless behavior and small rectum size. Colicky horses are also at a greater risk of tearing due to repeated rectal exams. Colicky horses are also typically dehydrated which can lead to a dry and fragile rectal lining (mucosa). You may hear of age and sex predilection being risk factors however they vary in the literature and are not consistent between studies as to whether younger or older horses are more "at risk".

Types of rectal tears:

You may hear rectal tears being classified on a 1-4 grade scale. This grading is based on which layer of the rectum is torn. It is important to classify a rectal tear to determine what course of treatment is best for the horse. The grades are broken down by which layer (or layers) of the rectum is (are) torn (see figure 1).

Measures your veterinarian takes to minimize risk:

For horses that are straining around the vet's arm, drugs such as Buscopan® or xylazine can be administered to reduce the straining and thereby reduce the risk for tearing. Buscopan is an antispasmodic that relaxes the smooth muscle in the rectum therefore relaxing the rectum of a straining horse. A caudal epidural (similar to epidurals women can have during childbirth) can also be used to decrease straining. Using ample lubrication and adequate restraint (sedation or a twitch) while performing a rectal exam also decreases the chances of causing a rectal tear.

How your vet will manage a rectal tear if it happens:

A rectal tear is usually detected when blood is present on the arm or sleeve of the examiner. This is a serious incident and should be dealt with promptly. With adequate initial management and prompt referral to a surgical clinic, horses have a 79% survival rate. The rectum should be evacuated of feces and the tear will be classified based on the grade it is (what layers of the rectum are torn) by palpation. Then the rectum should be packed with a moistened cotton roll covered by a stockinette and sprayed in Iodine to reduce the fecal contamination into the tear. Packing the rectum is intended to deliver a better surgical candidate to a referral center for further treatment. Starting the horse on broad spectrum antibiotics to combat any fecal contamination as well as an anti-inflammatory is also beneficial. Mineral oil can also be administered through a nasogastric tube to soften and lubricate the feces for a laxative effect. Horses will then need to be referred for further evaluation and surgical correction of the tear.

Prognosis:

Prognosis for horses with rectal tears depends on the size, grade of the tear, time between occurrence and treatment, as well as prompt initial first aid by your veterinarian. In various studies looking at the outcome for horses with rectal tears, the prognosis for each grade varies however it is fairly unanimous that grade 4 tears (which go through all layers of the rectum) typically have a poor prognosis and can be rapidly fatal.

In summary:

Rectal tears can happen, but that should not deter a rectal exam from being performed when it is a valuable diagnostic tool. There is so much information your vet can gain by rectal palpation which can sway decisions one way or another when deciding the best course of action for a horse. With proper and adequate restraint, the risk of tearing is very low.



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EHV-1 Rears its Ugly Head

How to Protect Your Horse from EHM while On-the-Go

By Abra Foster, DVM Student (Class of 2016)

Co-authored by Dr. Sandy Taylor, DVM, PhD, Dipl. ACVIM, Purdue Large Animal Internal Medicine



Traveling with your horse can be one of the most fun and exciting parts of your relationship. Whether you travel to a show or trail ride with friends, it's one of the ways many people enjoy the companionship of their equine friends. Unfortunately, with any form of travel and interaction with other horses, there is a risk of exposure to contagious diseases. Within recent months, reports of outbreaks of disease caused by Equine Herpes Virus 1 (EHV-1) have been reported in the Midwest. Understanding this virus and how it could affect your horse is the first step to protecting him or her from this very scary disease. EHV-1 is a common virus that most horses are infected with at some point in their life. As with human herpes viruses, the virus lies dormant in lymphoid tissue and can be reactivated during times of stress. Vaccination of horses against EHV-1 helps prevent infection with other strains of EHV-1, and can help decrease shedding of virus in respiratory secretions if reactivation occurs.

EHV-1 infection usually results in respiratory disease, abortion, or early neonatal death. But just like many other viruses, there are different strains of EHV-1. One of the strains of EHV-1 can cause Equine Herpes Myeloencephalopathy (EHM), which occurs when the virus infects the central nervous system. This is a serious and sometimes fatal manifestation of EHV-1 disease, because the spinal cord (and occasionally the brain) are damaged. The affected horse presents with neurologic signs, including weakness or incoordination of the hind limbs, urine dribbling, and sometimes, impaired mental status. This manifestation of infection can lead to very serious complications, including the inability to rise and death.

Much research has been done in recent years to determine why some horses develop EHM while others do not. Recent studies have found that most cases of EHM are caused by a specific variant of the EHV-1 virus, which resulted from a genetic mutation. This EHM variant is not currently protected against with the vaccinations that are available to horse owners. Without the means to prevent infection through administration of a vaccine, it is imperative that you take precautions to decrease exposure to the EHM variant, and to be aware of clinical signs (symptoms) in order to administer treatment as soon as possible.

How to be proactive in protecting your horse from EHM while traveling:

- 🌀 Avoid physical contact with unknown horses—especially nose-to-nose contact
 - EHV-1 is shed in the nasal secretions even in horses that look healthy
- 🌀 If you touch an unknown horse, wash your hands with soap and water before touching your horse

- 🌀 Do not share equipment, water buckets, feed bins, pitch forks, etc with other horses
- 🌀 Decontaminate any equipment or environment (such as a stall) if you have to share, using a 1:10 bleach to water solution
- 🌀 Upon returning to your barn, monitor your horse's temperature for 10 days, and call your veterinarian if the temperature is > 102F
 - Fever is often the first sign of possible infection and is strongly associated with EHM infection
- 🌀 Keep horses that regularly travel separated from horses in your barn that stay home
- 🌀 Vaccinate your horses against EHV-1 regularly
 - Although it does not provide protection from the EHM variant, it has been shown to significantly reduce the viral shedding in the event of infection and this is very important to slowing the spread of the disease to other horses

The mechanism by which the EHM variant of EHV-1 causes neurologic disease is not fully understood. White blood cells infected with the virus are believed to travel through the blood and then infect endothelial cells (cells lining the wall of the blood vessels) in the central nervous system. This can lead to thrombosis (blood clots), which cuts off blood supply to the spinal cord or brain. This leads to severe damage and results in neurologic clinical signs. The severity of the signs will factor strongly into the prognosis of the horse. Neurologic clinical signs of EHM often show up 6-10 days after infection and will happen very suddenly. Close daily monitoring of temperature and assessing for any neurologic changes will be key to your proactive approach to protecting your horse after traveling.

If you suspect that your horse has EHM, call your veterinarian immediately! The most important aspect of EHM treatment is supportive and nursing care, which often includes intravenous fluid therapy, nutritional support, and treating or preventing complications associated with recumbency (being unable to rise). Anti-viral drugs such as valacyclovir may improve the prognosis in horses with EHM, but not all horses respond/improve with this treatment. It is also important to administer anti-inflammatory drugs to decrease inflammation in the central nervous system. The majority of horses that survive EHM will show improvement within 10-14 days of treatment.

Information is power. Although EHV-1 infection is not completely preventable, you can take steps to help protect your horse against EHM during your next traveling adventure. If you have any concerns or suspect your horse has developed EHM, contact your primary veterinarian immediately to discuss the next step.

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A Red Bag:

NOT the Season's Hottest Accessory, but... a Foaling Emergency!

By Ashley Miller, DVM Student (Class of 2015)
Edited by Dr. Teresa Buchheit, DVM, MS, Dipl. ACVIM,
Purdue Equine Community Practice

Foaling can be an event that is equal parts exciting and nerve wracking for novice and experienced horse owners alike. Every owner should be aware of the events of a normal foaling, as well as complications that can arise. One such complication that is an extreme emergency is premature placental separation, or “red bag delivery.” This complication makes up 5-10% of all abortion, stillbirth and perinatal death cases in horses.

In a normal foaling, the chorioallantois (the outer placental membrane that attaches to the uterus) ruptures and releases allantoic fluid—the horse’s “water breaks.” After this, a thin, clear membrane, called the amnion or water bag (the inner membrane of the placenta that surrounds the foal and contains amniotic fluid) will emerge from the vulva and as labor progresses the foal’s front feet and nose should be visible inside the bag. In a red bag delivery, the chorioallantois, which is a velvety dark-red color, prematurely separates from the uterine wall and protrudes through the vulva. This causes a dangerous decrease in oxygen transport to the foal and the foal can suffer from hypoxia (lack of oxygen) and may even die of asphyxiation if the condition is not corrected quickly.



Normal – amnion emerging from vulva



Abnormal – chorioallantois emerging from vulva

Veterinarians should educate their clients on what to do if this condition occurs. Owners and those assisting with foalings should be instructed to have on hand a sharp, clean instrument (such as scissors or a knife) to immediately open the red placental membrane. The veterinarian’s number should be kept handy and called once the bag is opened and the foal should be delivered as soon as possible. If available, the newborn foal should be supplemented with oxygen as quickly as possible after delivery. Owners should continue to keep a close eye on the foal, as these foals can develop delayed signs of hypoxia even though they may appear normal at birth.

The causes of premature placental separation in the mare are many. Premature placental separation can occur with placental infections (placentitis), fescue toxicity, death of a fetal twin or when an abortion is about to happen. If an abortion is imminent, the delivery of the aborted fetus can be assisted to prevent a dystocia. If the cervix is closed and the fetus is still alive, progesterone and flunixin meglumine (Banamine®) therapy may permit the pregnancy to be carried to term. Antibiotic therapy should be started systemically if placentitis is suspected.

Owners should monitor all pregnant mares closely and contact their veterinarian if an abnormality is detected. Recognition of a red bag delivery and immediate intervention are key factors for survival of the foal.

Resources:

Red Bag Image: <http://www.miniatureventures.com/redbag1.jpg>

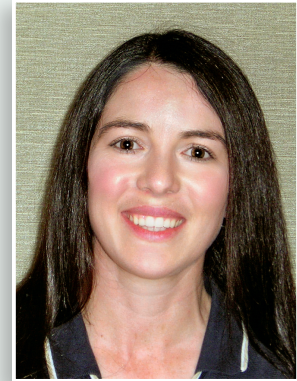
Amnion Image: https://www.azpinarabians.com/images/Amniotic-membrane_B.jpg

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McCue, P. *Red Bag – A Foaling Emergency*. CSU Equine Reproduction Laboratory.

News & Notes

New Veterinarian:



Dr. Teresa Buchheit

Dr. Teresa Buchheit joins the Purdue Equine Community Practice from North Carolina. She was born and raised in Chesterton, IN and decided to become a veterinarian when she was just 7 years old. She obtained her DVM from Purdue University in May of 2005.

Teresa completed an equine medicine and surgery internship at the Mississippi State University Animal Health Center and went on to complete a large animal internal medicine residency at the University of Tennessee Veterinary Medical Center. In February 2010 she earned board certification in Large Animal Internal Medicine by the American College of Veterinary Internal Medicine.

After the residency, Teresa spent almost a year working as an equine practitioner in a private practice in Eastern Tennessee before returning to academia to complete a Master’s of Science at North Carolina State University, where her research interests were in equine sepsis and systemic inflammatory disease.

Teresa’s professional interests include neonatal medicine, neurology, and endocrine/metabolic disorders; although, she enjoys all facets of equine practice. She also has an interest in camelid medicine.

When not working as a veterinarian, Teresa spends most of her time enjoying the outdoors with her husband and their Labradors. Teresa also is involved with raising future assistance dogs for a national service dog organization, Canine Companions for Independence.



Tail Alterations *(continued from pg. 2)*

Electromyography (EMG) is the official diagnostic test utilized by the AQHA to identify destruction of the nervous control of the muscles involved in tail movement. Electromyography involves the insertion of small needles into the muscles around the tail to measure the electrical activity within the muscles. In muscles that are enervated from an alcohol injection, the normal activity of the muscle in response to the insertion of the needle is absent, and its place there will be spontaneous, disorganized electrical activity. Veterinarians trained in this technique use EMG to identify horses at AQHA shows suspected of having blocked tails so that they are penalized appropriately and disqualified from competition. It is mandated by the AQHA that any horse whose tail is confirmed by examination and EMG to have been altered that that horse is banned from competition in AQHA sanctioned events for at least a year, and longer if the function of the tail remains abnormal.

Despite statements in the rulebook of the American Quarter Horse Association (AQHA) clearly outlawing the practice of blocking tails, this procedure is still performed with potentially fatal consequences to the animal. While AQHA has in place specific parameters by which tail function is assessed, other breed associations involved in western disciplines do not clearly prohibit the practice. The American Paint Horse Association (APHA) states that “A judge may, at his discretion, penalize a horse for excessive or exaggerated switching of the tail or for a seemingly “dead” tail that merely dangles between the legs and does not show a normal response.” However, while the rulebook states that “any item or appliance that restricts the movement or circulation of the tail,” cannot be utilized while on show grounds, there is no statement barring the practice outside of the show grounds. The Appaloosa Horse Club (ApHC), like the APHA, states that “No horse is to be penalized for the manner in which he carries his tail nor for normal response with his tail to cues from his exhibitor or when changing leads.” Unfortunately, despite these statements that imply that tail paralysis is not to be tolerated, there are no specific testing strategies in place to identify horse whose tails have been blocked, nor are there specific statements

Although many horse people think that the nicking of a Saddlebred’s (or other breeds where high tail carriage is desirable) is harmless, like blocking, a number of complications can arise. Nicking is a procedure where the tendons that attach to the tail are cut to allow the tail to be placed into the desirable upright position by a tail set. Horses whose tails have been nicked often wear these tail sets the majority of the time that they are not being ridden. They generally need to be confined individually while wearing the sets. Unfortunately, while many horses with nicked tails do retain the ability to move their tails, this procedure is not without risk. The most troubling story of tail nicking gone wrong was published in the *Journal of the American Veterinary Medical Association* and describes a 2 year old Tennessee Walking Horse colt who developed colic and eventually died as a result of having his tail nicked. A post mortem examination (autopsy) of this colt showed that the incisions from the nicking had become infected and the pus had migrated into the abdominal cavity. Other reported complications of this procedure include development of wry tail or inability to put the tail down into a normal position.

Just as the AQHA has rules in place to deter competitors from having tail alterations performed on their horses, the USEF recently implemented rules that are to be applied to American Saddlebreds. The new rule “prohibits tail carriage alteration procedures on foals of birth year 2014 and thereafter.” Additionally, it emphasizes that horses tails are not to be kept in any tail setting device while on show grounds, but regrettably does state that “The fact that a horse’s tail has once been set does not exclude participation.” In the Morgan section of the USEF handbook, more explicit guidelines are in place stating that judges must penalize unnatural tails that have evidence of tail setting, a vertical break over, or wry tail. Conversely, the National Show Horse division has no guidelines prohibiting or even discouraging tail alterations.

Organizations within the veterinary community, such as the American College of Veterinary Internal Medicine (ACVIM) - Large Animal Internal Medicine (LAIM) specialists and American Association of Equine Practitioners (AAEP), have recently begun working to raise awareness of tail altering procedures, and to encourage competitors, judges, trainers, and other veterinarians to end this appalling practice. While organizations like AQHA have strict protocols and penalties in place in the event that a horse is suspected of having had its tail altered, others need to follow suit and continue to enforce these rules. Unfortunately, these practices have been present for over 30 years, and likely will take a long term plan and involvement of many branches of the equine industry to abolish. There are few legal statutes in place to protect horses against such inhumane practices, making prosecution difficult or impossible. Exhibitors and owners, who may be found culpable, even without knowledge that their horse’s tail has been altered, need to educate themselves on any and all procedures and medications recommended by a trainer to ensure that their horses are not being subjected to inhumane procedures. Hopefully, judges will be properly instructed at judge’s education events and less reluctant to uphold current rules against tail alterations by not penalizing horses for normal tail position and movement. With time and pressure from owners and exhibitors, less weight will be placed on the appearance of a horse’s tail and more on the horse’s performance. Once judges fail to reward abnormal tail carriage, trainers and serious exhibitors will follow suit by discontinuing the practice to maintain a competitive edge. As with any change to a long standing practice, preventing people from altering horses’ tails will likely be a prolonged battle, but a necessary one to improve the welfare of our equine companions. Please join the concerned equine veterinarians of ACVIM—LAIM and AAEP in doing your part to end this inhumane, unnecessary and potentially dangerous procedure.

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By Stacy H. Tinkler, DVM, MPH, Dipl. ACVIM, Purdue Equine Community Practice

With the numerous feed options available for horses, it's a wonder any horse owner (or veterinarian) can keep anything straight! One thing we do know—gone are the days when it was thought that all every horse needed was some cracked corn and oats for a healthy diet. There is a lot more to equine nutrition than that, and feeding for life-stage (young growing vs older and less active), physiologic status (pregnant vs lactating), or activity level (idle, mild-moderate performance—intense exercise) requires different nutritional considerations. We know that most idle horses will maintain their body weight on a good quality pasture or hay without additional dietary supplementation; however, do you really know if all their nutritional needs are being met by your pasture or hay? Just like us, there are plenty of people who maintain an adequate body weight or are even overweight because they eat enough or too much food, but they are in fact nutritionally deficient in micronutrients due to a poor diet, and are actually less healthy. Without hay or pasture analysis, you really don't know what your horse is getting in its diet, but there are some ways to provide your horse essential amino acids, vitamins and minerals if hay analysis doesn't make sense for you. One feed option that owners or veterinarians may notice in the local feed store, or hear their clients talk about, is a product called a ration balancer. Almost all feed companies have their lines of ration balancers, some are called “diet balancers,” or “grass balancers” but they are all similar products. Let's see what you know about ration balancers and if these could be a good fit for you and your horse!

MYTH or FACT? My horse is on an all-forage diet so he doesn't need a ration balancer.

MYTH: Mature horses able to maintain their weight on an all-forage diet of hay or pasture, otherwise known as “easy keepers,” would benefit from a ration balancer. Why? Well, there are lots of types of legume and grass hays out there and the nutritional content of these hays varies greatly depending on the region where they are grown, and when and how they are harvested. Protein, vitamin, and mineral deficiencies may be present in your forage and ration balancers are often used to compensate for these deficiencies. One important thing to note is that if your horse eats 50% or more of its diet as grass hay, it needs a balancer meant to be fed with grass or a grass formula. The same is true of alfalfa, if the diet is 50% or more alfalfa you should use the alfalfa formula to keep protein and minerals balanced for this type of forage.

MYTH or FACT? Feeding too much protein to my weanlings will make them grow too quickly and end up with crooked legs.

MYTH: Young horses need a high protein diet for optimal growth. Ration balancers were formulated for the growing horse, and are meant to be fed in conjunction with a high-quality forage source so they can provide the amino acids, vitamins, and minerals a horse needs without the excess calories (from too much energy from carbohydrates or fats) that could put young horses at higher risk of developmental orthopedic diseases such as physitis (joint swelling), angular limb deformities, contracted tendons, OCD (osteochondrosis dissecans) or wobbler's/CVM (cervical vertebral malformation).

Regarding mature horses, ration balancers typically have lower feeding rates than regular concentrates. Because ration balancers contain concentrated levels of amino acids, vitamins, and minerals, most mature horses can get the necessary nutrients by consuming 1-2 pounds per day. The crude protein level in grass ration balancers generally ranges from ~28-32%, with some other supplements that go even higher. Due to the smaller overall amount fed, the total daily protein consumed by your horse on a 32% crude protein ration balancer is not much different than following the bag tag and feeding the recommended amounts of a 12% crude protein feed—it's just that you feed more of the 12% protein feed to your horse. When feeding ration balancers, you need to make sure that the rest of the horse's diet consists of high quality forage—either grass or pasture.

MYTH or FACT? Ration balancers are low in starch so they are a good option for my laminitic pony/horse.

FACT: A ration balancer is a good option for those horses that cannot tolerate high sugar and starch levels in some grains or concentrates, such as those with Cushing's disease (pituitary pars intermedia dysfunction or PPID), insulin resistance/equine metabolic syndrome (EMS), or chronic laminitis. As ration balancers are fed in small amounts and consist of amino acids, vitamins and minerals primarily, by feeding them you are not contributing significantly to starch or sugar levels in your horse's diet. This can be especially important in horses that have their hay soaked to remove simple sugars—when you soak hay, you can remove up to 30% of the water soluble sugars in it, which is great for lowering the sugar content, but you are all also losing essential water soluble vitamins and minerals in that process. By providing a ration balancer you can minimize nutrient deficiencies due to hay soaking. Additionally, the lower glycemic index (sugar spikes in the blood) of a ration balancer has the potential to lessen a horse's hyperactive behavior making it a less “hot” option for your horse. Protein does not make horses “hot”, excess energy in the form of too many calories does.

Take Home Messages

All of the feed companies have their version of a ration balancer. When choosing one that is right for you, cost and convenience will likely be part of the decision making process. Feeding ration balancers is less expensive than feeding grain, even though the cost per bag may be higher. This is because a balancer is concentrated and you feed much less of it daily than you would when feeding grain or other concentrates. The ration balancer is a great feed option for all classes of horse. Because you feed smaller amounts of it, and it has lower sugar and starch levels, it can be incorporated into any feeding program with a high quality forage source and often no other additional supplementation is needed. Read the bag carefully as some ration balancers are meant to be fed with a primarily grass forage diet, and others with legume-based forage diets. Contact your veterinarian or consult an equine nutritionist if you have any questions about integrating a ration balancer into your horse's diet. ↻

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