

Sustaining Your Equine Athlete During Performance Season

By Lauren Marlborough, BSc (Hons), CESMT

Finally those winter blankets have been stored away, windows have been opened wide to allow the cooling breeze to flow through the barn and grazed upon green pastures can be seen for miles under the warm sun. Many riders look forward to the summer season as the ideal time to ride, train and continue to work their horses into a conditioning program to make them more fit for the high demands of the performance stage. A fit horse allows for physical tasks to be executed with minimal effort, great stamina and a lower risk of injury². Thus, changes to the horse's daily regimen and feeding program take effect during the hot summer months as preparation. All these changes can have an effect on the temperament, moods and emotional reactions of the horse which can be detrimental to their performance, but more importantly to their overall health.

The savvy trainer and horse owner will consider the well-being of the whole horse when creating a fitness program and observe the horse's health throughout the performance season. By keeping an eye on attitude, appetite, weight and coat condition, one will determine whether they are suffering from your demands or thriving on them. The many demands of the sports in which our equine athletes participate might vary, but one thing remains constant – they need to be fit to provide their very best performance. A horse's fitness level and physiological state can be compromised greatly if the horse does not consume enough energy (calories), proteins, vitamins, minerals and salts¹⁰. Therefore, your horse will depend on you to prepare it and prevent illness or injury due to the seasonal stress, demands and consequences of being a high performance equine athlete. To attain optimal individual performance within any equestrian discipline, horses must be in peak physical fitness, the correct physiological state⁹ and nutritionally healthy to be successful.

MAINTAINING WEIGHT

Horses constantly infect themselves with parasites while eating on ground contaminated by manure. In temperate and humid climates, parasites have an environment in which to proliferate year round as even during the cold winter their eggs lie dormant awaiting the



warmer weather to hatch¹⁰. Parasites have the ability to cause damage as they migrate through the horse's body, affecting the lungs, liver and the gastrointestinal tract⁶ and are known to compromise a horse's ability to obtain sufficient nutrients from their feed¹⁰. Obvious signs of parasitic infestation in a horse are weight loss, low energy, tires easily, loses interest in food, bouts of colic, intermittent diarrhoea or loose stool, coat is dull, delays in shedding out, and overall poor performance^{6,10}. Chronic bleeding within the organs and intestinal ulcers have been known to occur which in turn can cause anemia and make the horse less resistant to viral and

bacterial infections. Regular deworming can prevent most of these symptoms and is a key feature of equine health management. Many commercially available deworming medicines contain fairly toxic chemicals that may have bad side effects for your horse. It's better to use a herbal product that will not produce harsh side effects, and even though you may have to administer the natural dewormer for a longer period of time, the outcome of the treatment is better for your horse overall.

Performance horses tend to have limited turnout requirements and often consume a diet of good quality forage and 2-3 meals of concentrate feed per day¹ as they expend large amounts of energy and need more digestible energy (mega-calories) to meet the body's demand and needs⁸. If the beneficial bacterial flora in your horse's hindgut is disrupted due to illness, stress, over-consumption of cereal grains, ulcers, forage restrictions or antibiotic therapy⁶, your horse will not be able to derive enough calories to maintain a normal weight. Special consideration should be given to older horses and hard keepers that have difficulty holding their weight as well.

Para-X is a great intestinal cleaner that helps rid the horse's body of various parasites using non-pharmaceutical ingredients and without harming the organs.

Biotic 8 is a pre & probiotic blend that assists with fibre digestion which can add to a horse's weight; it increases nutrient absorption into the bloodstream; it provides essential minerals to boost energy levels; and it encourages gut mobility.

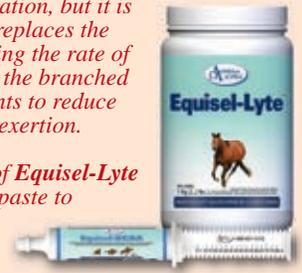


DEHYDRATION

Water consumption is critical during the hot summer months to keep the horse hydrated, help maintain its appetite, ensure that fibre reaches the digestive system, and to allow intestinal bacteria to break down food and prevent blockages¹². Clean, cool water should be available during turnout and while the horse is stall-kept. Dehydration from inadequate water availability, lack of water consumption, or even eating hay (contains 10% water) rather than grass (contains 80% water) can all contribute to dehydration⁵. In turn, dehydration can increase the frequency of impaction colic and tie-up, and the lack of hydration in the musculature and joints during exhaustive exercise can cause a greater potential for injuries. Other issues that arise during the hot months are due to sweating from exercise and overheating which can both bring on dehydration and can be life threatening if left untreated⁶. Sweat regulates internal body temperature, but the required moisture (water) must be pulled from the bloodstream and continuously removed from the digestive system, and eventually from the spaces between cells. Performance horses have a tendency to sweat profusely during work and would benefit from the addition of electrolytes to their diet as long as there aren't copious amounts of sugar (glucose) added as this can dilute the actual contents of the electrolyte⁸. Rehydration using electrolytes allows horses to restore homeostasis within the body.

Equisel-Lyte not only aids in rehydration, but it is also a muscle builder. It essentially replaces the minerals lost in sweat while increasing the rate of repair of damaged muscles by using the branched chain amino acids (BCAA) ingredients to reduce muscle breakdown after exercise or exertion.

Equisel-BCAA has all the benefits of Equisel-Lyte but in a convenient and easy-to-use paste to rehydrate and rebuild muscle in your horse.



ANXIETY & STRESS

With the demands of a rigorous conditioning program, trailer transport, staying in a new environment and the push of good performance there is no doubt a horse can undergo high stress and anxiety levels during the competition season. Studies show that 80-90% of all racehorses, 60% of performance horses (including Eventers, Jumpers and Western performance horses) and 30% of Dressage horses develop gastric ulcers during the normal course of their careers. Internally, a horse under a stressful situation has overactive endocrine glands which floods the body with adrenaline and cortisol – the `stress hormone`-- and their heart rate increases. Externally, the horse may exhibit signs of stress and anxiety by swishing their tails, pawing at the ground, bucking, kicking, biting and fleeing the troubling factor. More extreme cases put the horses in distress and the threshold between stress and distress varies from horse to horse. Distressed horses exhibit behaviours such as nervousness and aggression, extreme irrational anxiety, excessive snorting and inordinate sensitivity to noise¹³.

Chill calms those horses that are excitable, have -performance jitters, trailer fright and behavioural problems. It helps the horse to focus the mind on the task at hand while not making them sleepy or dopey. This product will not negatively affect performance.

Chill Ultra a convenient way to take your favourite calmer "Chill" on the road. We've added the muscle relaxing benefits associated with Vitamin B1 and Magnesium to the focusing power of Chill in a concentrated paste format.

Gastra-FX is used as an aid in the maintenance of normal stomach health as it soothes and promotes a healthy gut system.

Gastra-FX Ultra is for pre-event use. Give 1 tube 15 minutes before bridling to settle the stomach.

RegenerEQ & RegenerEQ Plus supports better prolonged stomach health and quickly stimulates appetite in horses that may be stressed from travel, competition, new surroundings or new feed.



JOINT & MUSCLE RECOVERY

The horse's body was designed to be active, perform delegated work and to be load bearing, all of which cause wear and tear on the horse's skeletal structure and muscle mass. Consider a significant warming up, cooling out period and stretching muscles to increase blood circulation to loosen up stiff muscles and joints before exercise or entering the competition stage. These actions are critical for the prevention of injury and the enhancement of performance throughout the year. Muscle fibres can strain or tear, ligaments might stretch and bones can develop fissures and fractures in response to repeated impact of hooves with the ground. Regular and gentle exercise between competitions allows for the care of the horse's joints by strengthening muscles, supporting bone structure and nourishing the joints with circulating joint (synovial) fluid. Each horse is different when it comes to their age, weight and work regime, therefore your horse's supplementation should be evaluated on their individual needs. The prevention and early recognition of injury or illness are key for sustaining an equine athlete both physically and mentally⁹. Therefore, keeping a watchful eye on the nutritional value of your horse's feed and forage will help in determining whether or not it requires supplementation to build and protect the bones, joints and muscles.

Sinew-X is a liquid formulation used to maintain healthy joints, muscles and ligaments while helping to reduce inflammation and supplying the body with sulfur, which assists with important biochemical reactions in the body.

Sinew-X Plus has the extra benefit of 100 mg of Hyaluronic Acid per 30 ml dose. It has no MSM to comply with competition rules.

GLS (D-Glucosamine) Powder maintains healthy joints by acting as a source of trace minerals for cartilage repair. It helps strengthen cartilage, ligaments and bones while supplying the body with sulfur to assist with important biochemical reactions in the body.

HA-180 is an advanced synovial fluid support for knees, hocks, ankles and for post-surgical cases with a unique delivery system.

MuscleGro is a concentrated paste that will encourage development of lean muscle mass with added support from ingredients such as BCAA, L-Glutamine, Gamma Oryzanol, R-Alpha Lipoic Acid and herbs.

Tetda is a natural liniment that is applied after exercise to soothe tired muscles, increase blood flow, aid in muscle recovery, and help with your horses' bruises, strains and sprains



Photo courtesy of WEF

RESPIRATORY ISSUES

Owners tend to confine their horses to their stalls more so during performance season to prevent injuries from occurring⁴ which also allows them to monitor and maintain the horse's weight and condition more closely. It reduces the horse's exposure to adverse weather, protecting their hair coat from sun and dirt⁶ and it allows owners to exercise their horses regularly to stay in peak condition for competition. However, they may suffer more respiratory problems from exposure to viruses and bacteria dispersed from feed, bedding, footing material, poor ventilation and dust particles⁶. Closing a stable up traps stale air pollution inside with an accumulation of urine ammonia, endotoxins, particulates from manure, dust, and molds from hay and bedding. These pollutants challenge the equine respiratory system¹¹.

Respi-Free is a first line treatment that supports a number of respiratory conditions. This 3-in-1 combination product contains Airwaves, Lung Flush and Herba Coff which benefits horses by helping to loosen phlegm, clear mucus, act as a bronchodilator and anti-bacterial agent, relieve bronchial spasms, stimulate blood flow to lung capillaries, stimulate lung macrophages, and it acts as a natural anti-histamine to alleviate allergic symptoms.



IMMUNE BOOSTING

Increased exercise schedules and performing at a higher level are more demanding on the horse's body and tends to play havoc on its immune function. The immune system--the body's defense against disease--is one of the most complex systems in the horse, consisting of an elaborate set of cells and cell mediators that respond to external factors such as stress, exercise, stage of life, and challenges from pathogens. Depending on the forage quality and amount given to your horse, supplementing appropriate mineral-vitamin mixes may be required, specifically vitamins A, D & E¹². A vitamin and mineral supplement along with added alfalfa for protein are important to maintain the immune system⁶. Vitamin D in particular controls the absorption, transport and deposition of calcium and phosphorus, influences cell growth and differentiation⁷ and maintains calcium homeostasis in the blood⁴. It is critical for your horse to get at least 8 hours of direct sunlight

each day⁶, however, there are several factors that interrupt vitamin D production in a horse. For example, stalling indoors, cloudy days, coat sprays, lower angle of the sun in the upper one third of the U.S. as well as throughout Canada⁶, use of blanket covering³ and hay that has been dried artificially³. Research indicates that without vitamin D, horses have difficulty absorbing calcium from their diets and their bodies will begin to withdraw calcium from bones⁷.

Healthy Horse is a 4-in-1 combination of Hemex, Lung Flush, Liver Flush and Immune Plus. Together, these products maintain red blood cell levels, stimulate the horse's immune system and thus help decrease the incidence of illness caused by viruses and bacteria, help clean and support the lungs by providing antioxidants, and increase oxygen exchange while cleansing and supporting the liver to synthesise proteins, glycogen and fats.

MinerEQ is the ultimate source of essential minerals, trace elements, vitamins and antioxidants. This product will aid in boosting your horse's immune system, fill mineral and vitamins gaps while giving them a more balanced nutrient-rich diet.

Vantiox not only provides essential vitamins, minerals and antioxidant properties, but it has muscle and cell protecting abilities for optimal performance.



CONCLUSION

In summary, competition can be both a stressful and exhausting experience for a horse and rider. It would be best to have your horse prepared mentally and physically for competition by conditioning all of the horse's body systems—respiratory, immune, digestive, skeletal and muscle—so that they can withstand increasing levels of exercise and allow the body to adapt to higher demands. By being proactive and using the correct supplements during competition, you and your horse will have the healthy advantage and ability to succeed.

REFERENCES

1. Agricultural Communications, Texas A&M University System. Cold Weather Colic in Horses. January 2011. Article #26773 <http://www.thehorse.com/print-article/26773>
2. Briggs, K. (1998). Determining Conditioning, July 1998 Article # 10486 [http://www.thehorse.com/\(F\(d5IA3meBVgM2JSrNuYf-mHGzk_xhEQjC6GesMAMJZucDENv-HS6vXgY0GUzSNMhJi1iArecPvej](http://www.thehorse.com/(F(d5IA3meBVgM2JSrNuYf-mHGzk_xhEQjC6GesMAMJZucDENv-HS6vXgY0GUzSNMhJi1iArecPvej)

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3. Crandell, K., (1998). Fat Soluble Vitamins and the Performance Horse. Kentucky Equine Research Inc. <http://www.ker.com/library/advances/125.pdf>
4. Duren, S.E., and Crandell, K., (2000). The Role of Vitamins in Growth of Horses. Kentucky Equine Research Inc. <http://www.ker.com/library/advances/227.pdf>
5. Equine Winter Nutrition, Activity & Horse Maintenance Tips for Colder Weather <http://www.horses-and-horse-information.com/articles/0102frozen.shtml>
6. Getty, J.M. (2010). Feed Your Horse Like a Horse. Dog Ear Publishing, Indianapolis Indiana.
7. Kemmet, L. (2010). Vitamin D Deficiency has Many Dangers for Horses, November 2010 Article # 5600 http://www.dressagedaily.com/index.php?option=com_content&view=article&id=5600:vitamin-d-deficiency-has-many-dangers-for-horses&catid=18:horse-health&Itemid=427
8. King, M. (2005). Equine Winter Nutrition. December 2005. Article #15717. <http://www.thehorse.com/print-article/15717>
9. Leste-Lassere, C. (2012). Creating a Sustainable Equine Athlete, November 2012 Article # 30905 <http://www.thehorse.com/print-article/30905>
10. Loving, Nancy S. (2006). All Horse Systems Go. Trafalgar Square Books, North Pomfret, VM
11. Loving, Nancy S. (2010). Consequences of Stall Confinement. April 2010. Article #15901 <http://www.thehorse.com/ViewArticle.aspx?ID=15901>
12. Ministry of Agriculture, Food and Rural Affairs "Management and Feeding of Horses in Cold Weather" <http://www.omafra.gov.on.ca/english/livestock/horses/facts/info-coldweather-man.htm>
13. Rala, P. (2009) Stress Busters. April 2009 Article #23114 <http://www.thehorse.com/articles/23114/stress-busters>



Lauren Marlborough has been an avid horsewoman for over 20 years, with several years experience in a variety of roles in the equine trades. She earned a BSc from Lakehead University, a post-graduate Honours Biological Science degree from Brock University, certification as an Equine Sports Massage Therapist, and she obtained the Equine Science Certificate with Distinction from the University of Guelph. Lauren operates her own equine therapy business in Southern Ontario.

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