

Depending on the forage quality and amount given to your horse, supplementing appropriate mineral-vitamin mixes may be required, specifically vitamins A, D & E¹⁵. A vitamin and mineral supplement along with added alfalfa for protein are important to maintain the immune system during winter conditions⁷. Vitamin D in particular controls the absorption, transport and deposition of calcium and phosphorus, influences cell growth and differentiation⁹ and maintains calcium homeostasis in the blood⁵. It is critical for your horse to get at least 8 hours of direct sunlight each day⁷, however there are several factors that interrupt vitamin D production in a horse during the winter; e.g. stalling indoors, cloudy days, shorter days, lower angle of the sun in the upper one third of the U.S as well as throughout Canada⁷, use of blanket covering⁴ and hay that has been dried artificially⁴. Research indicates that without vitamin D, horses have difficulty absorbing calcium from their diets and their bodies will begin to withdraw calcium from bones⁹.

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.



In summary, don't let the cold winter months play havoc on your horses' joints, immune, digestive and respiratory system. By being proactive and using the correct supplements as prevention measures, you can prepare your horse to overcome the winter "whoas" and look forward to a happy and healthy spring together!

Lauren Marlborough has been an avid horsewoman for over 15 years with several years experience in many sectors of the horse industry. She carries a BSc from Lakehead University, an Honours Biological Science post-degree from Brock University, Certification as an Equine Sports Massage Therapist, has obtained the Equine Science Certificate with Distinction from the University of Guelph and has her own equine therapy business in Southern Ontario.

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ESSENTIAL Living

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Your essential guide to living well

Supplementing Your Horses' Winter "Whoas"

By Lauren Marlborough, BSc (Hons), CESMT

Shorter days, lower temperatures, snow-covered paddocks, and a sealed tight barn can mean only one thing – winter has returned! Even though your horse's coat has thickened and you're dragging the heavy horse blankets out of storage, horses love it when there is a chill in the air. Upon turn-out one can often see them running and bucking in glee due to the cool, crisp conditions and snow-covered ground. Although evolution enables them to bear the cold through exercise, exposure to fresh air, and the ability to graze in a herd, the colder weather can be especially hard on their bodies. Your horse relies on you to prepare him against extreme weather conditions, and even in the areas that experience a milder winter; adjustments need to be made to ensure their health and well-being.

JOINT SUPPORT

Winter workouts are valuable for maintaining fitness, preserving training and promoting well-being; however, exercise in the cold can be detrimental to a horse's ligaments, tendons, joints and muscles¹⁰. Warming up, cooling out and stretching cold muscles are important for getting the blood circulation going and loosening up stiff muscles and joints. These actions are



critical for the prevention of injury and the enhancement of performance throughout the year, but especially so with the onset of frosty temperatures¹⁵. Frozen ground, cold temperatures, and stiff muscles and tendons can result in muscle damage or even a bowed tendon. Walking on icy surfaces or having snow or ice impacted into the horses' hooves can even lead to injury⁷.

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



GLS 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 sulphur to assist with important biochemical reactions in the body.



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Older horses may need joint protection during colder months, particularly Vitamin C for collagen protection as senior horses produce less Vitamin C than younger horses⁵. When possible, turn your senior horse out to pasture in winter to maintain muscle tone, to keep its joints moving and lubricated, and to warm itself by moving around¹⁴.

Vantiox provides antioxidants to the body by way of essential vitamins like C & E, and minerals like beta-Carotene, zinc and selenium for overall optimal muscle and cell protection



AntiFlam reduces discomfort and aids with recovery from body aches particularly in the back, joints, legs and feet. This product strengthens ligaments and joints while supplying the body with sulphur to assist with important biochemical reactions in the body.

DIGESTION & WEIGHT

During the winter, pasture grass is either limited or non-existent and horses are subjected to an increase in hay intake. Hay has a tendency to lose nutrient value over time and horses should have access to high fibre forage¹⁵ to increase caloric intake, enabling them to generate body heat and maintain normal core temperature⁶. Alfalfa and Timothy-grass hay are recommended in the winter months as they provide higher energy (calories) levels. A fortified 2:1 calcium-phosphorus mixture is recommended for feeding with grass hays and a 1:1 calcium-phosphorus mixture is recommended for feeding with alfalfa hay¹⁵. A horse's metabolic rate will increase and they will burn more calories to maintain a normal internal body temperature⁷. A horse derives heat and

calories from hay through microbial fermentation in the hindgut, therefore, the microbial population needs to remain plentiful and healthy year round, but more so in the winter months⁷.

Biotic 8 is a great winter supplement as: it 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 motility which in turn keeps the horse warm during the cold temperatures.



Special consideration should be given to older horses and hard keepers that have difficulty holding their weight. 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 therapy⁷, your horse will not be able to derive enough calories to maintain a normal weight. Also, be sure your horse's teeth are checked before winter sets in as poor dental health can lead to weight loss in all ages of horses, predominantly in senior horses. You should monitor your horse's body condition year-round, but it's especially important to do so before harsh weather arrives¹⁰.

WATER CONSUMPTION

Water consumption is critical during the winter 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 blockages¹⁵. Clean water should be adequately heated between 2-10°C and readily available at all times. Do not rely on snow to meet your horse's water requirements as it can lead to hypothermia. Not only does eating snow force your horse to burn precious calories to keep their body temperature steady, but 1 Gallon (128 fluid ounces) of average moisture snow only provides 10 ounces of water⁷. Other issues that arise during the winter is due to sweating from exercise, or overheating under blankets which can both bring on dehydration. This can be life threatening if left untreated⁷. Sweat regulates internal body temperature, but the required moisture (water) is first pulled from the bloodstream and continues to be removed from the digestive system, and eventually from the spaces between cells. 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 dehydration⁶. In turn, dehydration can increase the frequency of impaction colic, tying up, and the musculature and joints tend to get cold and stiff, causing a greater potential for injuries.



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 acid (BCAA) ingredients to reduce muscle breakdown after exercise or exertion.

RESPIRATORY CONDITIONS

Due to the colder weather, horses are often turned in earlier, reducing the amount of time outside during the day and are prone to more respiratory conditions. Closing a stable up tightly traps stale air pollution inside with accumulation of urine ammonia, endotoxin particulates from manure, dust, and molds from hay and bedding. These pollutants challenge the equine respiratory system¹³. Heaves is the most common respiratory ailment in horses that are confined indoors or fed dusty hay. Heaves is characterized by chronic cough, lack of stamina, laboured breathing, weight loss, lack of response to antibiotics, and sometimes a watery discharge from the nostrils. It is most common in adult horses since prolonged exposure to respiratory irritants brings on the reaction. The breathing difficulty is due to inflammation and swelling that narrows the air passages¹⁸.

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 bronchospasms, stimulate blood flow to lung capillaries, stimulate lung macrophages and act as a natural anti-histamine to alleviate allergic symptoms.



IMMUNE SUPPORT

Winter stress and cold can play havoc on a horse's body by decreasing 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 pathogens¹⁷.



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.

