

Questions & Answers

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What is a free radical?

A free radical is a highly reactive form of oxygen capable of destroying cells within the body. In the process of breaking down (oxidizing) carbon-containing compounds (carbohydrates, protein and fat) for energy, oxygen is used and carbon dioxide and water are produced. When water is formed from oxygen, a highly reactive form of oxygen (free radical) can be produced which, if not destroyed, damages living cells. Antioxidants, such as vitamin E and selenium, are present within the body to help destroy free radicals before they damage cells.

Because athletic horses require abundant amounts of energy to perform, the chances of them producing free radicals are greater than that for idle horses. Therefore, the diets of performance horses need to be supplemented with antioxidants. Vitamin E and selenium, two powerful antioxidants, are required in larger amounts in performance horse diets compared to nonathletic horse rations.

Do young racehorses that are beginning training require additional calcium?

Much work has been done on calcium requirements in mature, idle horses and growing horses. However, little research had concentrated on the mineral requirements of 18-24 month-old horses entering training. When feeding young performance horses, not only do you have to worry about providing the correct balance of nutrients for optimum growth, but you also must be concerned with providing the correct balance of nutrients for exercise. For years it was common for young performance horses to be fed the correct amount of calcium for growth and the additional calcium required for exercise would take care of itself because performance horses typically eat more feed. However, a current study in which 53 Quarter Horse yearlings were fed according to growth requirements while being placed in race training demonstrated a substantial decrease in optical density of the cannon bone during the first two months of the study. The study was the first to highlight that young performance horses may be calcium deficient when they enter training. Interestingly, a study was conducted examining factors associated with shin soreness in human athletes. The study contained 25 athletes that developed shin soreness and 25 control athletes who matched the injured athletes in age, sex and sport but did not have shin soreness. Of the 25 shin sore athletes, only three

consumed the recommended daily allowance of calcium. This study indicated that low calcium intake was related to shin soreness.

The good news is that getting adequate calcium into a young performance horse is very simple. Feeding a fortified concentrate with a small portion of the hay being fed in the form of alfalfa provides adequate calcium for the combination of growth and exercise performance. If the amount of vitamin and mineral rich grain is being restricted during the early stages of training, additional sources of minerals should be provided as a supplement.

My horse has an intensive show schedule for part of the year. Is there anything I can do to keep him from getting ulcers and to increase his appetite?

Horses may develop gastric ulcers for a number of reasons, but most result in an increase of acid in the stomach, which will irritate the stomach lining and start ulceration. Factors that may increase stomach acid production in the show horse would be stress of trailering and changes in diet, eating habits, and environment. Research reveals it takes only seven days for gastric lesions to develop once a horse is placed in a stressful situation. Horses repeatedly put in stressful situations will not have a chance for the stomach to repair, resulting in chronic problems.

Anything done to minimize stress will help decrease the amount of stomach acid produced. Although difficult, keeping the diet and time of feeding on the road as close as possible to that of home will help. Because of the stresses involved with travel, the energy requirement of the horse may increase, which in turn requires more feed for the horse to maintain weight. Spreading larger amounts of feed into more meals per day will help reduce acid production. Keeping hay available is always a good idea when traveling; not only will the saliva buffer the stomach acids, but hay also provides stress-reducing entertainment for the horse.

"An ounce of prevention is worth a pound of cure" is an adage that rings true with gastric ulcers. During travel and competition an antacid such as Neigh-Lox can be fed as a preventative measure. Neigh-Lox helps the body cope at a time when natural buffering systems are overtaxed. It comes in a convenient pellet and can be easily incorporated into each of the horse's feedings while on the road. Neigh-Lox can be used only during traveling and competing or used everyday if the horse has a tendency to get ulcers at home. ☺☺

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