



# Say goodbye to sore muscles!

**LoosenUP** has been formulated by expert nutritionists and veterinarians as an aid to prevent and treat exercise induced muscle damage, soreness and stiffness. **LoosenUP** protects your horse's muscular system. The ingredients in **LoosenUP** decrease muscle soreness and stiffness during exercise and reduce the recovery time following intense work.

**LoosenUP** stops muscle problems before they stop your horse!

## WHAT IS IN LoosenUP?

**LoosenUP** contains a unique blend of antioxidants including vitamin E, selenium and vitamin C as well as magnesium and chromium.

Antioxidants protect cells and tissues from a normal metabolic process called oxidation, which is the use of oxygen to break down carbohydrates, fats, and protein for energy. A by-product of oxidation is the formation of free radicals, compounds that damage cells and tissues. In the performance horse, this damage can appear as muscle soreness or stiffness. **LoosenUP** is a blend of anti-oxidants, targeted at preventing free radicals from damaging muscles.

### LoosenUP contains:

- **Vitamin E:** Vitamin E is present in cell membranes where it helps to prevent free radical damage by blocking free radical attacks on lipids and thus preventing the formation of lipid peroxides (oxidising agents).
- **Selenium:** Some lipid peroxides still form however, even in the presence of Vitamin E. Selenium is essential for the enzyme Glutathione peroxidase which is found within the cell and destroys lipid peroxides. Lipid peroxides are formed within the cell and then released into the body as free radicals. Selenium helps to reduce the amount of these free radicals.
- **Vitamin C:** Like glutathione peroxidase, **Vitamin C** is also an intracellular anti-oxidant that functions to defend the cell contents from oxidative attack. Vitamin C is also believed to be capable of regenerating vitamin E in the body. Once a molecule of vitamin E neutralizes a free radical, it is no longer useful. In the presence of vitamin C, however, vitamin E can be recycled and used to fend off other free radicals. *Providing Vitamin E in conjunction with vitamin C gives the horse a much higher level of protection from free radical attack.*
- **Magnesium:** During exercise, magnesium is lost in sweat. Much of the body's magnesium is stored within the skeleton. The transfer of magnesium from the bones to the bloodstream is often delayed and not efficient for rapid replacement during periods of heavy sweating. Supplementing an equine athlete's ration with magnesium may be necessary for optimal muscle function.
- **Chromium:** present in a readily available form as chromium yeast. Research has shown that during fast exercise chromium supplementation can slow the build-up of lactic acid. Lactic acid is one of the metabolic waste products resulting from anaerobic metabolism, and a major contributor to muscle fatigue.

## WHAT IS OXIDATION AND WHY ARE THE INGREDIENTS IN LoosenUP SO IMPORTANT TO EFFECTIVE PERFORMANCE?

Oxidation is a normal metabolic process in which fats, carbohydrates and proteins are converted into energy to fuel body functions. Without oxidation, horses couldn't live, work, grow or reproduce. An unavoidable side effect of oxidation however is the production of free radicals which are molecules capable of destroying cellular structure and tissues.

### How does exercise affect oxidation rates?

As the body uses more and more oxygen to perform, free radical production increases. This hyper-production of free radicals can provoke significant tissue damage.

### What is an antioxidant?

Antioxidants are dietary compounds, including vitamin E, vitamin C and selenium, which inactivate free radicals and block oxidative reactions. Free radicals produced as a result of infrequent, low intensity exercise can usually be neutralized by the horse's baseline antioxidant defence systems. However, excessive production of free radicals, which often occurs with intense exercise, may overwhelm these basic antioxidant mechanisms meaning damage to cells and tissue will occur. Supplementation with a powerful medley of antioxidants such as that contained in **LoosenUP** may therefore be necessary for horses training or competing in demanding sports.

The balanced mix of antioxidants in **LoosenUP** provides comprehensive cellular protection, which leads to healthier muscles that recover faster from exhaustive exercise.

## WHICH HORSES NEED LoosenUP?

Recent surveys in Australia have shown that many diets are deficient in vitamin E and it is well known that many Australian types of forage are deficient in selenium. In addition, some commercially produced complete feeds and concentrates contain sub-optimal levels of these nutrients for performance horses. In addition, the vitamin C content of stored feeds is variable and unreliable and the benefit of chromium supplementation over and above that contained naturally in horse feeds has been shown.

Therefore **LoosenUP** will benefit all horses in a regular training or competition program or horses that are used consistently for work (including school horses and trail riding mounts) that have low or sub-optimal levels of antioxidants in their diet.

## WHAT ARE SOME VISIBLE SIGNS THAT MY HORSE NEEDS LoosenUP?

- Reduced tolerance for work due to fatigued muscles.
- Muscle soreness and delayed recovery from work.
- Poor appetite due to pain and fatigue.
- Dark reddish-brown urine indicating muscle damage.

**Note:** if severe muscle tightening or soreness persists the horse may have a condition called polysaccharide storage myopathy or another condition known as recurrent exertional rhabdomyolysis. This is what historically has been called "Monday Morning Disease" or "tying up", and should not be confused with muscle soreness or fatigue due to a nutrient deficiency. While LoosenUP and MuscleGUARD can be used as part of a treatment and prevention program for horses with these conditions, these horses should be receiving veterinary attention. KelatoLYTE electrolyte should also be incorporated into their daily feeding program.

## WHICH EQUINE ATHLETES MAY BENEFIT FROM LoosenUP?

Increased oxidative stress has been measured in horses performing high-intensity, short-duration exercise and low-intensity, long-duration exercise. Therefore, **LoosenUP** would be appropriate for all performance horses for example: racehorses, three-day event horses, endurance horses, and polo ponies.

## CAN LoosenUP BENEFIT MY HORSE AFTER A STRESSFUL PERFORMANCE OR IF MUSCLE DAMAGE HAS ALREADY OCCURRED?

The most dramatic effects noted by users of **LoosenUP** occur when it is administered following hard work when signs of muscle fatigue and damage are evident. **LoosenUP** will help horses recover from work sooner and return to feed more quickly, eliminating downtime between performances and training periods.

## DO MOST HORSE FEEDS CONTAIN SELENIUM AND VITAMIN E?

Forages and most fortified concentrates contain vitamin E and selenium in varying and often unpredictable amounts. Commonly, the amount of these two nutrients found in the average daily horse ration is not enough to meet the demands of horses undergoing strenuous training and competition, and will not provide sufficient help for these horses to ensure they recover quickly from hard work. Therefore supplementation is often necessary. You must however keep in mind that both selenium and vitamin E can be toxic when over-supplemented and as such **LoosenUP** must not be included in diets already containing optimal levels of these nutrients.

## LoosenUP KEY FACTS

### Feeding Directions

Feed 30 grams per day mixed in feed.

### How is LoosenUP fed?

**LoosenUP** is added to the daily feed. If feeding the full 30 g, it should be divided and fed over 2 meals. LoosenUP should be added to the feed just prior to feeding.

### Ingredients:

d-alpha-tocopherol acetate (vitamin E), ascorbic acid (vitamin C), sodium selenite, magnesium oxide and chromium yeast.

**Vitamin E** is a powerful antioxidant that protects cell membranes from free-radical induced damage.

**Selenium** is a component of glutathione peroxidase, a powerful antioxidant that works within a cell to protect them from oxidative damage.

**Chromium** (as the organic, readily bioavailable form known as chromium yeast) is in **LoosenUP** because during fast exercise chromium supplementation has been demonstrated to slow the build up of lactic acid, one of the metabolic waste products resulting from anaerobic metabolism, and a major contributor to muscle fatigue.

Each 30 gram dose provides:	
Vitamin E	1000 mg
Selenium	2 mg
Magnesium	3000 mg
Vitamin C	500 mg
Chromium	5 mg

**Vitamin C** is an antioxidant that protects the tissues from free-radical damage by scavenging oxygen radicals from aqueous solutions.

**Magnesium** is a mineral necessary for proper muscle and nerve function.

## SCIENTIFICALLY FORMULATED

**LoosenUP** is a supplemental source of vitamins and minerals specially formulated for performance horses that experience exercise-induced myopathies such as stiffness, soreness and tying-up. **LoosenUP** contains vitamins E and C, two powerful antioxidants that protect cells from oxidative damage by scavenging free radicals. In addition, selenium, a component of the anti-oxidant enzyme glutathione peroxidase, is included in **LoosenUP** and finally magnesium, a mineral necessary for proper muscle and nerve function is included in the formulation.

