



OPTIMISE MUSCLE RECOVERY AFTER EXERCISE

If you require repeated optimum performance from your horse you need maximal recovery of your horses muscles following exercise. There are many types of athletic horses who require maximal muscle recovery; racehorses who are racing again within a few days, event horses who have to show-jump after their cross-country, endurance horses in a multi-day endurance ride, polo-ponies competing for many days. All these horses need their muscles to recover as quickly as possible so they can perform maximally again. For optimal recovery the muscles must work as efficiently as possible so that muscle damage during exercise is minimal. There are a number of supplements which can be given before and after exercise that will help muscles recover more rapidly.

PRE-EXERCISE SUPPLEMENTS:

1. L-carnitine

Supplementing with L-carnitine improves energy supply to muscles during exercise. L-carnitine supplementation has been shown to enhance both sprint and endurance performance. L-carnitine increases endurance ability, as L-carnitine controls fat metabolism and fat is the main energy source for endurance exercise. During sprinting L-carnitine plays an important role in carbohydrate metabolism by buffering lactic acid and thus delaying the onset of fatigue. Supplementation has been shown to increase maximal work output and VO_2 max during sprint exercise. L-carnitine is also essential for normal heart function. Supplementing with L-carnitine before exercise means the muscles will work better and recover faster after exercise.

2. Phosphate

Phosphate buffers lactic acid build-up within muscle cells which helps to delay the onset of muscle fatigue. Supplementing with phosphate which helps maximise oxygen supply. Phosphate supplements improve energy supply to muscles during exercise. Reduced lactic acid build-up and improved energy supply during exercise means muscles work better and recover faster after exercise.





POST-EXERCISE SUPPLEMENTS:

3. Branched Chain Amino Acids;

Valine, Leucine, Isoleucine

The three branched chain amino acids valine, leucine and isoleucine make up one-third of muscle protein. During exercise increased muscle activity results in significant losses of these three branch chain amino acids (BCAAs). Increased intake of BCAAs will inhibit the breakdown of protein which occurs in exercising muscles which can improve performance, reduce fatigue and aid repair and recovery from intense exercise. Increased supply of BCAAs after exercise will significantly improve muscle RECOVERY so that muscles are ready to exercise again sooner. It is important to administer BCAAs within 30 minutes of completion of strenuous work or exercise.

4. Ornithine Alpha-Ketoglutarate (OAK)

OAK decreases muscle damage during exercise and increases muscle synthesis after exercise. OAK can act as a fuel source, thus sparing glucose. OAK acts as an ammonia scavenger to soak up ammonia which builds up during exercise. OAK stimulates the release of growth hormone, which has a muscle building effect. Supplementing with OAK increases available glutamine and thus supports the immune system. OAK is an essential but little known supplement for animals in strenuous training.

Supplementing with L-carnitine and phosphate before exercise will enhance muscle function during exercise. BCAAs and OAK given after exercise will optimise replenishment of nutrients used during exercise. By assisting muscles to recover as quickly as possible maximises the opportunity for improved performance the following day.

