

MITACHONDRAL INJECTION

L-CARNITINE & ENDORPHIN PRECURSOR

OTC

Amino acid combination to reduce pain perception and enhance muscle endurance



COMPOSITION

L-Carnitine 200 mg/mL
L-Isoleucine 5.33 mg/mL
D-Phenylalanine 4 mg/mL

ACTIONS

Mitochondral supplements L-Carnitine plus endorphin precursors. Use Mitochondral as a pre-event treatment after regular supplementation with L-Carnitine twice weekly.

Mitochondral supplies the amino acid L-Carnitine in the same manner as L-Carnitine injection and paste, but has the added amino acids Phenylalanine and Isoleucine.

Phenylalanine is an essential amino acid which inhibits the breakdown of opiate-like substances in the brain called encephalins.¹ Reduced breakdown of encephalins by phenylalanine results in analgesia (pain relief).²

Isoleucine is also involved in the production of endorphins.

Phenylalanine is also anti-inflammatory and has been used in human patients to treat chronic pain.¹

L-Carnitine is essential for normal heart and skeletal muscle function. During hard exercise there is extensive loss of L-Carnitine, and this often cannot be replaced adequately from the diet alone.

High levels of L-Carnitine are necessary, because L-Carnitine plays an essential role in muscle metabolism during exercise by forming the transport system which moves fatty acids into muscle cells for conversion into energy. L-Carnitine also inhibits the buildup of lactic acid in muscles, which helps delay fatigue in hard working muscles. Fatigue causes pain in muscles. L-Carnitine delays muscle fatigue by reducing lactic acid formation, and improves sprint and endurance performance.³

It increases endurance, as fat is the major energy source for endurance exercise. During sprinting L-Carnitine buffers lactic acid and delays fatigue.

L-Carnitine supplementation increases maximum work output, and is of value especially in horses which are prone to fatigue and Tying Up. The added amino acids aids in reducing the perception of pain which may follow muscle fatigue and Tying Up.

INDICATIONS

L-Carnitine and amino acid supplement for horses and dogs.

DOSAGE AND ADMINISTRATION

Horses: 15 - 25 mL by intramuscular injection 2 times weekly or as directed.

WARNINGS

Meat Withholding Period (Horses): Nil

PRESENTATION

100 mL sterile glass multi-dose vial.

STORAGE

Store below 25°C (Air Conditioning). Protect from light.
Use within 6 months of initial broaching.

AVAILABILITY

For General Sale (APVMA 52848)

AVAILABILITY

If used in performance animals, the regulations of the relevant authorities regarding medication should be observed

HANDY HINT

Mitochondral may be used as a pre-event treatment after L-Carnitine has been used for regular twice weekly supplementation.

REFERENCES

1. Ehrenpreis 1985 Prog. Clin. Biol. Res. 192:363-370
2. Bodnar et al, 1980. Pharm. Biochem. Behav. 13:829-833
3. Rivero JL, et al., 2002 Equine Vet. J. Suppl. 34:269-74.