

Ingredients in Detail

DL-Phenylalanine and **L-Leucine** are D-amino acids that have been shown in studies to produce effective analgesia in horses. They operate by presumably preserving brain endorphins, as well as binding reversibly to enkephalinases and preventing enzymatic degradation of enkephalins. Chronic use of these D-amino acids does not produce tolerance and physical dependence in studies of both humans and mice. It is suggested in studies that D-amino acids may be one of the best drugs for treatment of acute or chronic pain in horses as they are both effective and show no significant side effects.¹

Bioactive whey isolate is made up of hyper-immunized milk proteins. These proteins contain building blocks called peptides. Research has documented that several of these peptides effectively reduce the influx of neutrophils (white blood cells) into the inflamed site of injury in horses, thus reducing secondary inflammatory response to injury. By limiting inflammation and the resulting pain, the components of bioactive whey isolate support both quick comfort and improved healing.

Curcumin has soothing (anti-inflammatory) properties. Curcumin inhibits the enzymes that participate in the synthesis of inflammatory substances in the body. Curcumin's anti-inflammatory activity, documented in human studies, is comparable in strength to some steroidal and non-steroidal drugs, while eliminating their accompanying dangerous side effects.

Bromelain known in nutraceutical circles as "nature's bute" has been found in studies to be especially effective in reducing pain and inflammation in soft tissue. In human studies, bromelain has proven effective in reducing swelling as popular anti-inflammatory medications. Studies document that human patients suffering from osteo-arthritis have experienced a reduction of pain and joint swelling when taking bromelain. Bromelain's anti-inflammatory effects may also alleviate pain and improve motor activity in patients with tendonitis. Bromelain helps return your horse to comfort during the pain cycle, and maintains him during rigorous exercise.

Boswellia extract provides natural systemic anti-inflammatory impact, perhaps most comparable to that of a corticosteroid. Many of the traditional uses of boswellia serrata in equine applications appear to be confirmed by human research. In one double blind human study, patients with osteoarthritis took either boswellia extract or a placebo for the first eight weeks of a 16-week study, then switched to the opposite for the second half of the study. In both parts of the study, those patients who took boswellia extract reported less knee pain, better mobility and improved walking distance.

Celadrin powder is a blend of acetylated fatty acids, esters and other synergistic agents that enhance cell membranes throughout the body, resulting in greater mobility and more normalized joint function. The extremely high user success rate and virtually complete absence of side effects has made Celadrin one of the new innovative miracle products in joint support. Celadrin addresses the inflammation found in joints of the high-level performance horse.

N-acetyl cystine and **olive extract** are well-documented, highly effective free radical scavengers. Free radicals are atoms that bind easily with cells and have the ability to greatly change their chemistry, often in a destructive manner. Inflammation and accompanying pain are closely related to the presence of large numbers of free radicals. As effective scavengers of these harmful free radicals, N-acetyl cystine and olive extract work to speed up necessary metabolic healing in exercise induced injury and strain.

¹L.S. McKibbin, R.S.S. Cheng 1982. Systemic D-Phenylalanine and D-Leucine for Effective Treatment of Pain in the Horse 39-40, Canadienne:LaRevue Veterinaire