



EXCELLENCE IN EQUINE NUTRITION



# KURASYN 360X

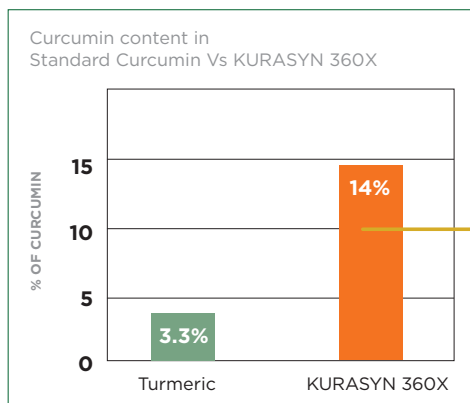
CURCUMIN AND HYALURONIC ACID  
SUPPORT SUPPLEMENT

# KURASYN 360X

A complementary feed supplement for horses containing highly bioavailable Curcumin combined with Hyaluronic acid. It can be fed to horses as a nutritional adjunct.

## CURCUMIN ACTIVE TURMERIC

Curcumin is the active component of turmeric, a well-known spice with antioxidant properties and provides support for the digestive, musculoskeletal and immune systems. Turmeric contains approximately 1.6-3.3% curcumin and is poorly absorbed in the body whereas the Curcumin content of the active material in KURASYN 360X contains 14% Curcumin, and is many times more bioavailable.



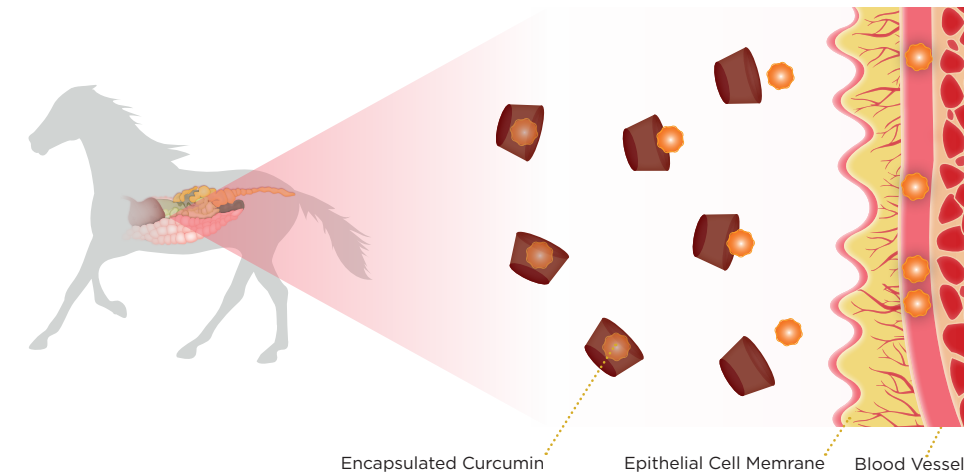
# 4.24X

The active material in KURASYN 360X contains 4.24 times more Curcumin than standard Turmeric.

## HOW CURCUMIN WORKS & BIOAVAILABILITY

The benefits of Curcumin are limited by its low solubility in water and corresponding intestinal absorption. Animal studies have shown natural/standard curcumin extract is rapidly metabolised and excreted in the faeces, therefore having limited systemic bioavailability. Curcumin must be given through a carrier to improve bioavailability and absorption into the blood and target tissues.

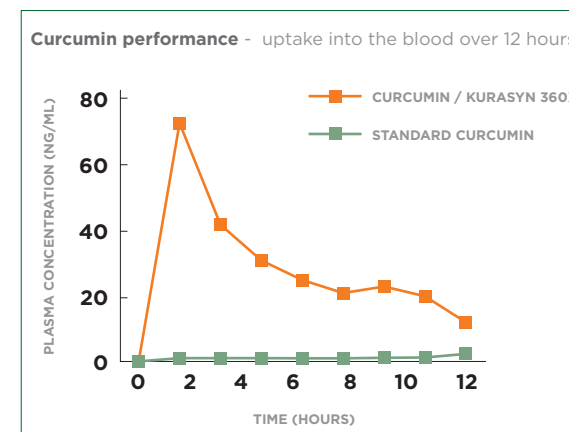
## KURASYN 360X - CURCUMIN IN THE GUT



A delivery strategy such as encapsulating curcumin with natural oligosaccharides improves aqueous solubility, dispersibility and absorption. The unique three-dimensional structure of this oligosaccharide creates an inner hydrophobic cavity which transports curcumin molecules to the intestines. The hydrophilic exterior, on the other hand, ensures compatibility in aqueous systems.

Curcumin is transported unchanged through the stomach into the upper intestinal tract where the curcumin molecules are absorbed into the body through the epithelial cell membrane.

A bioavailability study using the curcumin included in KURASYN 360X showed that Curcumin was **85 times more efficiently absorbed** into the blood, compared to standard curcumin powder derived from Turmeric. (Purpura et al).



# 85X

Faster and more efficient absorption than standard Turmeric.

# POTENT ANTI-OXIDANT FOR MUSCLE & EXERCISE RECOVERY

High level competition and heavy training causes an increase in muscle and joint soreness. This can limit performance in training and subsequently in competition.

Many studies have demonstrated that intense exercise produces considerable amounts of reactive oxygen species (ROS). The production of ROS as a result of exercise has been linked to muscle damage and soreness. During physical exercise, oxygen flux to active skeletal muscles increases, which leads to excess production of ROS, free radicals and eventually oxidative stress. (Kinnunen et al 2005).

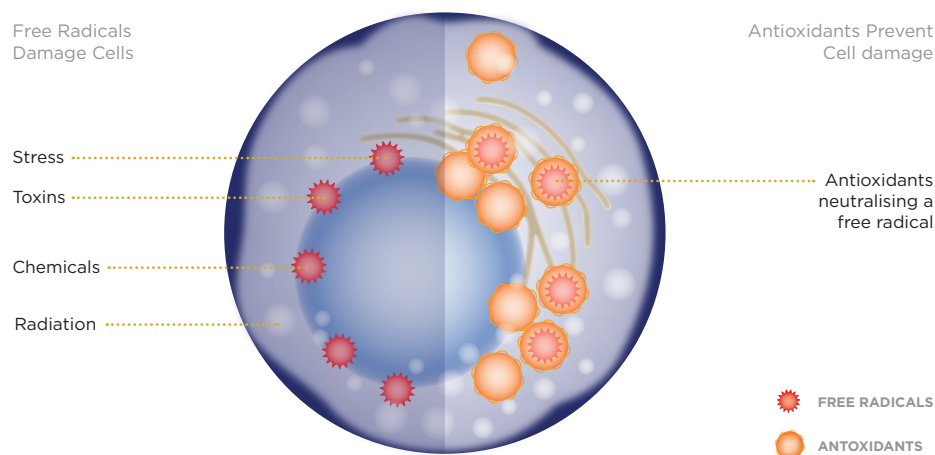
Oxidative stress as a result of exercise has been well documented in horses and has been associated with decreased physical performance, muscular fatigue, muscle damage, and overtraining. In order to prevent oxidative stress, the body contains a large network of antioxidants that either prevent ROS formation or scavenge free radicals.

Strenuous physical exercise, where the consumption of oxygen is increased can result in a state of oxidative stress. (FisherWellman and Bloomer 2009b). Defense mechanisms that cope with oxidative stress depends primarily on the synergism between several endogenous and dietary antioxidants. (Sen et al. 2000).

Curcumin has remarkable antioxidant activity and its main mode of action of is via free-radical scavenging. It has shown to be more effective than Vitamin C and Vitamin E and superoxide dismutase (Sharma OP). At the same concentration it has about twice the antioxidative activity of the polyphenol resveratrol (Aftab & Viera).



## Antioxidants at work



# HYALURONIC ACID

Hyaluronic acid is distributed widely throughout the body and is found in connective, epithelial and neural tissues. It is one of the main components of the extracellular matrix in the joint. Hyaluronic acid is responsible for the viscosity and lubricating properties of synovial fluid ensuring correct and smooth movement of the joint.

Its function is to bind water and to lubricate movable parts of the body such as joints and muscles. In the cartilage matrix, aggrecan is the major proteoglycan, it binds with Hyaluronic acid and link proteins and provides a gel structure that gives the cartilage its load-bearing properties (Kiani et al 2002). Hyaluronic acid also acts as an efficient scavenger of free radicals and cellular debris in the joints (Laurent et al 1996, 1995).

A study in the Rood and Riddle Equine hospital in Lexington reported that oral HA reduced joint effusion post operatively following arthroscopic removal of an OCD lesion in the tarsocrural joint. In another study, horses supplemented daily with 100mg of oral hyaluronic acid showed improved soundness in all parameters.

There are many types of Hyaluronic acid: purified HA from rooster comb, hydrolysed chicken cartilage; however they do not match the biological properties of native HA found in the body. Hyaluronic acid used in KURASYN 360X is purified HA derived from microbial fermentation and is almost identical to native HA.

There is published evidence of oral absorption, the Journal of Agriculture Food and Chemistry investigated the uptake of hyaluronic acid in animals. The study demonstrated that Hyaluronic acid is absorbed into the bloodstream and tissues, especially connective tissues after oral ingestion of purified HA derived from microbial fermentation.



# KURASYN 360X

## Curcumin and Hyaluronic Acid Support Supplement

KURASYN 360X is a complementary feed supplement for horses containing highly bioavailable Curcumin combined with Hyaluronic acid.

It contains a fast acting Curcumin extract complexed with a naturally occurring oligosaccharide, and has significantly better absorption compared with standard Turmeric.

### Instructions for proper use:

KURASYN 360X should be added to the normal feed ration.

Maintenance feeding rate is 25ml. per day, but during periods of intense training and recovery feed 50ml. per day.

Care should be taken feeding white nosed horses, as the product may stain - it is recommended to feed directly to the horse.

Composition	per 50 ml
Sodium Hyaluronate	155 mg
(Hyaluronic Acid content 150 mg/50ml)	
Sorbitol, Glycerine.	

Additives	per 50 ml
Curcuma longa L.	1500 mg

### Analytical Constituents:

Crude Protein 0.1%, Crude Oil 0.5%, Crude Fibre 0.4%, Crude Ash 0.3%, Moisture 64.9%, Sodium 0.0537%.

Free from Banned Substances.

PRESENTATION:

1L

2L

## KURASYN 360X

- Contains Powerful & Natural antioxidants.
- The active material in KurasyN 360X contains more than 4X the amount of active Curcumin compared to Turmeric.
- Curcumin in KurasyN 360X is 85X more bioavailable than standard Curcumin from Turmeric.
- Contains 150mg Hyaluronic acid per 50ml feed which can assist in the maintenance of synovial fluid - the joint lubricant.
- Contains no prohibited substances.

## WHEN TO USE?

- ☑ Before and after periods of physical stress.
- ☑ Continuously for horses in hard training, and intense competition.
- ☑ For maintenance of normal joint function.
- ☑ During periods of rehabilitation from injury.
- ☑ For horses reluctant to complete their training tasks.

