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P.O. Box 1013  
Versailles, KY 40383  
800-772-1988  
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## Contribute™

### Add beneficial omega-3 fatty acids to your horse's diet with Contribute

- Guaranteed ratio of 8:1 omega-3 to omega-6 fatty acids
- 1 oz provides over 10g of omega-3 fatty acids
- Helps bring your horse's omega-3 levels into balance
- Highly palatable and stabilized
- Provides linoleic acid and linolenic acid plus EPA and DHA
- Recommended for performance horses, breeding stock, seniors, and growing horses

The anti-inflammatory properties of omega-3 fatty acids benefit virtually every system in your horse's body, including the immune system, reproductive system, inflammatory process, nervous system, bone development, and cardiovascular system. Contribute's unique concentrated formula provides a blend of both marine and plant sources of omega-3 fatty acids for complete coverage.

### Omega fatty acids: why are they important?

Omega fatty acids are known as essential fatty acids because they cannot be synthesized in the body and must be provided in the diet. Omega fatty acids are split into two categories: omega-6 and omega-3 fatty acids. Both are necessary to the wellbeing of the horse; however, it is the amount of both of these acids relative to each other that is most important for overall health. Functioning at the cellular level, omega fatty acids impact the cell membrane, therefore influencing every system in the body. When properly balanced the two types of fatty acids work in concert to keep your horse healthy.

Omega-3 and omega-6 fatty acids are metabolized by cells in the body and used in the synthesis of hormone-like substances called prostaglandins. The primary function of these prostaglandins is the regulation of essential body functions such as blood clotting, blood pressure, immune and inflammatory response. Prostaglandins produced from the omega-6 series typically have a pro inflammatory response and increase blood clotting, whereas those produced from the omega-3 series tend to have the opposite effect by mitigating the inflammatory response and decreasing blood clotting. Both the omega-6 and omega-3 fatty acids compete for the same enzymes in the production of these prostaglandins, so it is the ratio of the omega-6 to omega-3 that has the greatest influence over inflammatory response and other vital body functions. When an abundance of omega-6 acids are consumed relative to the amount of omega-3, cells increase the production of prostaglandins from the omega-6 series leading to an increase in inflammation, which, over time, leads to multiple health problems.

### Modern management and the effect on omega ratios

Horses evolved to exist on a grass-based diet high in omega-3 fatty acids and low in omega-6 fatty acids. In an effort to support the increasing energy demands made on modern horses, man introduced large amounts of grains into their diets. These grains,

which are high in omega-6 fatty acids, throw the critical 6 to 3 ratio out of whack. Supplementing with a high-quality omega-3 fatty acid brings that ratio back into balance.

### Why supplying multiple sources of omega-3 fatty acids is important

Alpha-linolenic acid is the most common omega-3 fatty acid and is found in plants. While horses generally obtain alpha-linolenic acid by eating grass and hay, flaxseed and linseed oil are the most concentrated best sources of this nutrient.

The omega-3 fatty acids known as EPA and DHA have also been identified as beneficial to the horse. These are generally found in fish oils. The shorter chained alpha-linolenic acids can be converted into the longer chained EPA and DHA; however, this process is very inefficient, hence the need to provide them in the diet.

### The benefits of omega fatty acids

#### In all horses, young and old

- Omega-3 fatty acids play a critical role in many systems within the body, including the inflammatory process, cardiovascular system, nervous system, bone development, reproductive system, and immune function
- Horses supplemented with EPA and DHA show an earlier inflammatory response, which may be advantageous in fighting infections
- Supplementation with omega-3 has shown a positive effect in mitigating allergic reactions, including skin allergies and seasonal pruritis (sweet itch)

#### In stallions and broodmares

- The omega-3 fatty acid DHA has a positive effect on both sperm output and quality; it also affects the sperm's cell membrane so it is better able to withstand cooling and freezing

- Mares consuming diets high in omega-3 have colostrum and milk with elevated levels; foals whose dams have been fed a diet rich in omega-3 have elevated serum levels of the nutrient, which results in a stronger immune system
- Research in other female animals has shown a positive effect in increasing conception rates and reducing reproductive problems; this combined with anecdotal evidence in mares suggests supplementation of mares' diets with omega-3 may be beneficial in increasing conception rates and reducing reproductive problems

#### In performance horses and racehorses

- Studies have shown omega-3 fatty acids to be beneficial in increasing stride length, indicating a benefit in reducing joint pain and promoting joint health
- Research has also shown that horses supplemented with omega-3 fatty acids from plant sources exhibit a reduced inflammatory response to exercise
- Studies are ongoing looking at the possible benefits of supplementation with omega-3 in decreasing exercise-induced pulmonary hemorrhage (EIPH), commonly referred to as "bleeding" in performance horses

### Why use Contribute?

The benefits of omega-3 fatty acids cannot be dismissed. Balancing the omega 6 to 3 fatty acid ratio in your horse's diet will enhance his health. Contribute offers you an affordable way to include both beneficial plant and marine sources of omega-3 fatty acids into the diet.

***For a complete set of references go to [www.kppusa.com](http://www.kppusa.com) and click on Contribute***



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