
Calming Horse Supplements: Tryptophan Research

By Kentucky Equine Research Staff •

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Anyone who has ridden an energetic young horse on a cool, windy day might wish for some sort of harmless way to take the edge off the horse's exuberance. Most horses calm down as the years go by and training progresses, and dietary changes (feeding higher levels of [fat](#) to replace some calories from starch, for instance) seem to make a difference in behavior for some horses. However, riders of horses that spook and jig for no obvious reason often look to commercial dietary supplements to hasten the process of settling down.

Supplements that list tryptophan as an active ingredient are available commercially, and some state that they are guaranteed to be effective.

Tryptophan, an amino acid that is a building block of serotonin, has been the object of several studies. Serotonin is related to sedation and lower levels of fear, stress, and aggression in humans as well as some animal species. This substance may be included in calming products sold for use in horses, and there is some anecdotal evidence that it helps in producing quieter behavior.

In [one Australian trial](#) to test the use of tryptophan in horses, researchers used 11 mature geldings that were fed oats once a day and free-choice [hay](#). Each horse was also given a threefold oral dose of a commercially available tryptophan paste designed for horses, or the same volume of water as a control. Blood samples were taken at intervals for the next six hours and tested for tryptophan levels.

Two hours after being treated, each horse was placed in the corner of an empty indoor arena and its behavior was observed for 10 minutes. The horse was returned to the corner and an unfamiliar person went to the center of the arena. The horse was released and behavior was again observed for 10 minutes. The horse was once more returned to the corner, a novel object was placed in the center instead of the human, and the horse was released and observed for an additional 10 minutes. For each horse, researchers recorded the frequency of forty behavioral variables. These included vocalizations and time elapsing before the horse explored the arena or approached the person or novel object. Except for a decreasing number of vocalizations in the first 20 minutes, there was no alteration of behavior for horses treated with tryptophan compared to horses treated with water.

Results of this study did not show a significant calming effect in horses given oral tryptophan paste. Riders dealing with overly energetic horses might try longeing before riding; exercising young horses in the company of an older, calm horse; limiting cantering, jumping, and other fast work until the horse responds well to the rider's aids; and working with a trainer or more experienced rider. Resorting to a stronger bit or underfeeding the horse to limit its energy are rarely successful management steps.

In further research on this subject, a [report](#) published in 2008 stated, "Plasma tryptophan increases when tryptophan is administered at a dose used in some commercial products, but this is not reflected by marked behavioural changes in the horse." Another [report](#) published in 2009 stated, "There is little evidence that herbal- or tryptophan-containing supplements influence equine behavior in any measurable way."

Supplements that list tryptophan as an active ingredient are available commercially, and some state that they are guaranteed to be effective; however, horse owners using these products should be aware that calming supplements may be less helpful in some horses than in others.