

To Calm The Beast Within

by REX A. EWING

It's race day. You know it, and, to your dismay, your horse knows it too. Maybe because his hay bag was smaller this morning or his grain ration was cut back. Or maybe he just knows. Because you know. You are acting different in subtle ways that only a horse could discern, the way you always act on race day.

The horse has been pacing his stall since breakfast. Already you can see fine beads of sweat glistening on his coat. You curse under your breath.

Then the PA system cuts in: "Trainers, get your horses ready for the third race." You begin the pre-race preparations: brushing and grooming, cleaning his nostrils, rubbing in a little menthol ointment to free up the air passages. You look at your horse's eyes and wonder if he even knows you. They look like size-five eyes in a number-three head.

In the paddock it just gets worse. He won't stand still. He stomps and turns and bobs his head. He acts like he's never had a saddle on his back. He wants to see everything. And he wants to be somewhere else. You wonder why he has totally lost all powers of concentration.

Sound familiar? It should. Almost anyone who has ever spent time in competition has lived some variation of this nightmare, and hopes to never have to live it again.

But what can you or I, or anyone, do about it? A veterinarian's medicine chest offers a plethora of injectables to take the edge off a horse; all of them illegal (in most competitions), and none of them desirable. You don't want your horse doped, you want it calm; to have the presence of mind to pay attention to business and perform as

well as you know it can; to gather together the fleeting demons of nervous fancy to be one dynamic force. Wait a minute. "Be one," as in B-1?

Vitamin B-1, AKA thiamin, has been the subject of scientific study since 1893. It was the first vitamin known to cure a pathological condition, namely, beriberi. Beriberi was (and still is) a disease found in human and poultry populations where polished rice was the primary food source. The addition of rice hulls to the diet could quickly alleviate the symptoms. (While it is true that citrus fruit was known to cure scurvy over 100 years earlier, at the time it was thought the condition was due to toxic substances in the diet, not a deficiency of any particular nutrient.)

Thiamin is an essential link in the chain that converts food into usable energy. Carbohydrates cannot be properly metabolized without it. Unless sufficient thiamin is present, pyruvic and lactic acid levels rise in the bloodstream, interfering with tissue respiration. Horses with high energy demands fed diets rich in carbohydrates (such as race or show horses) often show signs of deficiency: nervousness, loss of appetite, diarrhea. Simply put, the more calories a horse eats, the more thiamin it needs to burn them.

Not surprisingly, most of our knowledge of thiamin has been gained through studies of human subjects. In teenagers, for instance, thiamin supplementation has been shown to reverse the symptoms of a chronic excess of sugar: irritability, loss of concentration, even neurotic behavior. When we consider the fact that we often feed our hot-blooded horses high carbohydrate rations (particularly sweet feed) and then confine them to small stalls for 22 hours a day, the parallels should be obvious.

How much thiamin does a horse need? According to the National Research Council, a hard working horse should have at least five milligrams of thiamin for each kilogram of dry matter in the diet. For most horses this would be between 50 and 80 milligrams per day. This is a bare-bones estimate; just enough to keep the horse a notch or two above a noticeable deficiency. Since thiamin is a water-soluble vitamin, it cannot be stored in the tissues like the fat-soluble vitamins A, D, K, and E; a continual source of it must be supplied to the horse. Although there is evidence that some thiamin is synthesized in the gut, it is minimal at best and hardly enough to sustain a hard-working horse.

While most feeds contain some thiamin, very few contain enough to offset a deficiency caused by the energy requirements of many performance horses. Brewer's Yeast is perhaps the most thiamin-rich of all horse feeds, with about 85 milligrams per kilogram. Unfortunately, yeast is generally fed in ounces, not kilos.

In any case, to alleviate the symptoms of nervousness so prevalent in performance stock, a good supplement is the only answer. Many horse owners routinely feed 1,000 to 2,000 milligrams a day with favorable results.

Will thiamin help your nervous horse? Chances are it will. While I know of no clinical studies that have ever been done with horses to verify thiamin's effectiveness, the anecdotal evidence is very encouraging. A few months ago I received a letter from a woman in Florida with an extreme case. She was attempting: "to reclaim a Thoroughbred who had extensive race training, but never raced due to her nerves. She was given up on when she started having nervous breakdowns (throwing herself) whenever setting foot on the track. From there she went to freezing whenever she thought she was going to the track. I've had her on 1,000 milligrams of thiamin per day for three weeks, and we are now doing round, relaxed trot work, trotting poles on the ground and have just started canter work. I've had her six months now and we've progressed further these last couple weeks than all the five-and-a-half months previous."

I sure can't argue with that.

Sources: Nutrient Requirements Of Horses: Fifth Revised Edition, National Academy Press, 1989; Feeding the Horse, The Blood Horse, 1969, "Vitamin B", by Dr. Howard D. Stow; The Complete Book Of Vitamins and Minerals for Health, Rodale Press, 1988; Private Correspondence from Laurel Beauchamp.