

## TYING-UP

By Rick Wolfe DVM

This article is being written to explain the “clinical” syndrome of tying-up in horses. The medical term for this condition is exertional myopathy. The word exertional means related to exercise, the prefix myo means muscle and the word pathy means pathology or abnormal. Thus we have pathology of the muscle related to exercise. Other names for similar conditions include “azoturia,” “Monday morning disease,” and “paralytic myoglobinuria.” Clinically ALL of these conditions are the same thing and are diagnosed and treated as tying-up. Treatment and management may be altered significantly depending on the SEVERITY of the condition. Humans can suffer from a similar condition called a “charlie horse.”

This condition is usually fairly easy to diagnose. The horse has almost always just finished some type of event such as racing, roping, jumping, etc. Shortly thereafter the horse becomes stiff and is reluctant to move. This stiffness can be generalized in that most all of the skeletal muscles are stiff or it can be somewhat isolated to one area such as one or both shoulders, one or both hips, stifles, etc. It appears as though the more the horse is made to walk, the worse it becomes. In mild cases the horse will calm down in a few hours, the muscles become more relaxed and everything is fairly normal. In severe cases the muscles become tighter and stay that way for many hours. The muscle cells are actually damaged and release by-products into the blood causing dehydration, shock, kidney problems, considerable pain and potential death. In our practice we have actually seen horses die from this condition. All of these horses were either mismanaged or treated too late. In moderate cases a horse may be “muscle sore” for days or even weeks if the condition is not treated early and managed properly.

CAUSES ---Irregular training or exercise is a common factor in this syndrome. For example a horse might be stalled or even kept in a pasture for a few days or longer and then exercised in competition without being ridden for awhile. In extreme cases we have seen many horses that will tie up from being out of training for one day! Obviously most horses do not tie up with irregular training or exercise but SOME horses do. Another factor is “nerves.” The majority of horses that tie up are somewhat nervous prior to the competition. Calming these horses down will prevent the condition in many cases. The third cause may be hormonal. Particularly on the racetrack it is well known that a healthy majority of horses that tie up are female. These individual patients are much more prone to tie up when they are in heat. Geldings are the second most likely to tie up. Stallions almost never tie up (but they can). A fourth cause may be nutritional. For years we have treated patients with vitamin E and Selenium products both by injection and orally. Calcium as well as other supplements have also been used.

TREATMENT---When a horse is actually tied up we recommend calling an experienced veterinarian to discuss the individual case and decide if the vet needs to attend the horse or not. When we treat these horses we always calm them down with some type of tranquilizer followed by anti-inflammatory drugs such as “bute” or “banamine.” IF we are there we usually try to walk the horse for just a few minutes to

allow the condition to resolve, and most of the time it works. If they do not walk out of it in just a few minutes we stop and put the horse in a stall. It is important to withdraw any feed or hay and allow these patients to drink water slowly. The reason we try to walk these horses out of the condition is that they will recover much quicker and are not usually very stiff the next day. In severe cases these horses may require large amounts of intravenous fluids as well as other treatments for shock and pain

MANAGEMENT---Horses that have a history of tying-up need to be trained and exercised on a regular basis. Each individual horse is different, the best training schedule will probably be determined by trial and error. Nervous patients need to be calmed down by educating them or with drugs if necessary. In our practice we have used hormone therapy in racing females, however, their behavior will become somewhat aggressive and we do not recommend this treatment where children or inexperienced horsemen are involved. Nutritional supplements help some of these horses.