

Ask A Vet: All Tied Up and Nowhere to Go

Sunday, October 12, 2014

Dear Dr. Weldy's,

I was about 15 minutes into a lesson on my horse the other day when he was suddenly dripping sweat all over, froze and refused to move, and began shaking and quivering. My trainer said he was tied up and we got him in a stall, let him rest, and within 30 minutes or so he was fine. I have never seen this before and never heard of tying up. What caused this and is there anything I can do to prevent this or treat it if it happens again?

Dear Reader,

What you're describing is actually a clinical syndrome that can be associated with a number of different conditions. Tying-up occurs when a horse experiences severe muscle pain, (think about sudden severe muscle cramps during exercise), and there is sometimes severe muscle damage occurring as well. The syndrome is also referred to as azoturia, (meaning excess nitrogen in the urine), as this muscle damage releases muscle protein (myoglobin) into the circulation which can cause kidney disease and failure. Azoturia will be evident by a dark coffee color or bright red color to the urine, or, in severe kidney failure, the inability to produce urine. These cases require intense IV fluid therapy to flush the myoglobin from the system to protect the kidneys from the toxic effects. Other cases are mild and will recover with just rest. The important thing is to recognize when tying up is occurring and to immediately stop exercise and allow the horse to rest (ideally limit even walking, although if a stall is close by, walk the horse slowly and calmly to the stall,) to limit further muscle damage from occurring. Pain medication can be administered, although this should only be done after consulting your veterinarian as some medications are also toxic to the kidneys and can exacerbate cases where kidney disease is occurring. In cases where off color urine or inability to produce urine is observed, fluid therapy should be initiated as soon as possible.

Causes of tying up are numerous. Some horses are predisposed by genetic disorders such as Polysaccharide Storage Myopathy which is especially common in Standardbred and Belgian horses and is also seen in Quarter horses and thoroughbreds. Some horses have a primary muscle disease known as recurrent exertional rhabdomyolysis which predisposes them to tying up episodes. Other horses may have no underlying condition but are still at risk if they are exercised at a level which they have not been appropriately conditioned for. Other conditions, (such as colic or HYPP), might also mimic the signs of tying up and should always be considered and ruled out or addressed accordingly. Prevention is aimed at the underlying cause which might require specific testing to identify. Those horses with no underlying condition should always be adequately warmed up at the beginning of exercise and carefully observed for signs of stress, overheating, and pain during work. This is true for every horse, regardless of history of tying up!

-Dr. Kathryn Ernst