

Q: *My Thoroughbred mare was diagnosed with "milk fever" eight days after foaling. Was she not receiving sufficient calcium in her diet before and after foaling?*

EN: Lactation tetany or hypocalcemia, which is similar to milk fever in dairy cows, is not common in horses, but does occur occasionally. It results from a dangerous drop in circulating calcium, a mineral important for normal transmission of nerve impulses and for muscle contraction.

Left untreated, hypocalcemia sometimes results in death. This condition usually occurs in early lactation because of the huge drain milk production places on whole-body calcium reserves. Hypocalcemia hit your mare during an exponential increase in milk production.

Most of the time hypocalcemia affects mares that are excellent milk producers and that are receiving only grass hay or pasture with little or no legume forage. Mares that are not eating well and not taking in enough nutrients can also be affected.

cases of hypocalcemia, the hormonal response to PTH may be too sluggish to meet immediate calcium needs, and the result is low blood calcium.

Oversupplementation of calcium in late pregnancy can decrease the body's normal ability to mobilize calcium from bone when it is needed. Mares also use much calcium late in gestation to mineralize the foal's skeleton. Both of these factors can lead to hypocalcemia in early lactation. It is important to meet, but not exceed, the mare's calcium requirements during the last two to three months of pregnancy. Other electrolyte abnormalities, such as low magnesium, can also affect blood calcium, so it is possible that some other condition contributed to this episode.

This may have been an isolated episode for this mare. In an effort to prevent this from recurring, follow these guidelines:

- Make sure there is sufficient calcium in the diet; the daily calcium requirement of the mare more than doubles with the onset of lactation;

- Excessive amounts of high-calcium forages or supplements should not be fed in the last trimester of gestation so that the endocrine mechanism for mobilizing calcium will

be functioning properly once the mare starts lactating;

- The addition of a high-calcium forage, like alfalfa, or calcium-supplemented trace-mineralized salt should begin with the onset of lactation; pastures with a mixture of grasses and clover are ideal for lactating mares; and

- Once the mare has foaled, monitor her forage intake to make sure she is eating well. If her appetite wanes, be aware that this could happen again. 🐾

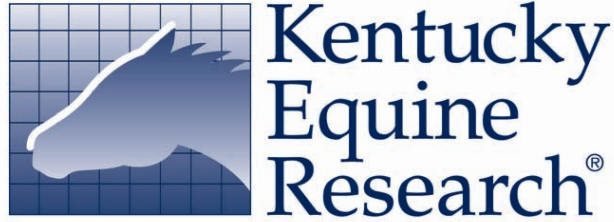


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Equine News Q & A

The reason for low blood calcium can be from a lack of calcium in the diet, but can also be the result of how the endocrine system responds to the sudden change in metabolic demands for calcium imposed by lactation. Calcium regulation is a complex process that involves at least seven organs or tissues, three hormones, and several enzymes and minerals. There are times when the body needs to be able to mobilize calcium from the bone to meet the high demands; parathyroid hormone (PTH) and vitamin D work together to stimulate this process. In

Mares that do not have access to adequate calcium during early lactation have an increased risk of hypocalcemia and its associated problems such as muscular weakness and recumbency.



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