Eclampsia (Puerperal Tetany, Milk Fever, Hypocalcemia) in Cats  
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Eclampsia, also called milk fever or puerperal tetany, is an acute, life-threatening disease caused by low blood calcium levels (hypocalcemia) in dogs and more rarely in cats. The lactating animal is especially susceptible to blood calcium depletion because of milk production. The bodies of some lactating dogs and cats simply cannot keep up with the increased demands for calcium. Animals with milk fever lack the ability to quickly move calcium into their milk without depleting their own blood levels of this mineral.

Eclampsia most commonly occurs 1-3 weeks after giving birth, but it can even occur during pregnancy. Litters do not need to be large to cause eclampsia. The kittens themselves are not affected, as the mother's milk appears to be normal during this period.

Signs of eclampsia

Eclampsia is a very serious disorder but fortunately the signs are fairly easy to recognize, especially when coupled with late term pregnancy and/or milk production. Initially, the affected cat will be restless and nervous. Within a short time, the queen will walk with a stiff gait and may even wobble or appear disoriented. Eventually, the cat may be unable to walk and her legs may become stiff or rigid. The cat may have a fever, with body temperature even over 105°F. The respiration rate (number of breaths per minute) will increase. At this point, death can occur if no treatment is given.

Treatment of eclampsia

If you suspect your cat has eclampsia, seek veterinary attention at once and prevent the kittens from nursing for at least 24 hours. Feed them with a commercial milk replacer. A veterinarian can confirm eclampsia with a blood test to determine blood calcium levels. Eclampsia can be rapidly corrected by your veterinarian through the use of intravenous calcium supplementation. The queen is monitored carefully for heart rhythm irregularities that can occur. She will be continued on oral calcium supplements, if necessary.

If the cat responds well to treatment, in some cases, the kittens may be gradually allowed to nurse again. If your cat has had eclampsia, be sure to consult with your veterinarian before allowing the kittens to nurse again.

Prevention of eclampsia

Over-supplementation of calcium during pregnancy may increase the risk of eclampsia. There is a complex way the body maintains the proper amount of calcium in the blood. The body is constantly adding calcium to bones and then removing it, as needed. This is regulated by a hormone produced by the parathyroid gland, called parathyroid hormone. If a cat receives large amounts of calcium during pregnancy, her body's production of parathyroid hormone greatly decreases. When the cat suddenly needs large amounts of calcium for milk production, the system is not ready to start removing it from the bone. This is because it takes some time for the parathyroid gland to start producing the hormone again. Because of the lack in parathyroid hormone, the blood calcium level suddenly drops, and produces the signs of eclampsia.

So, adequate amounts of calcium need to be given during pregnancy, but not enough to slow down the production of parathyroid hormone. This means calcium supplements are generally not recommended. Also, it is important for the calcium and phosphorus in the diet to be at the correct ratio of 1:1 (i.e.; 1 part calcium to 1 part phosphorus). Vitamin D must also be present in adequate amounts.

Once a female cat has had milk fever, there may be an increased chance that she will also have it with future litters. Be sure to work closely with your veterinarian if your cat has had eclampsia in the past and is pregnant again.

In conclusion, it is of great importance for owners of pregnant or nursing cats to be able to recognize the signs of eclampsia. If you feel your female is showing these signs, remove the kittens to prevent further nursing and seek veterinary assistance at once.

Inappropriate calcium supplementation can predispose a queen to develop eclampsia.