



POST-PARTURIENT HYPOCALCEMIA

ABOUT THE DISEASE

Low blood calcium is medically referred to as **hypocalcemia**. While there are several different causes of **hypocalcemia**, but when it relates to the reproductive system it is a sudden, life-threatening condition that is seen within hours to the first 3 weeks after giving birth.

In the veterinary profession, this is also known as **eclampsia**, but is very different from the human type of **eclampsia**.

Factors leading to an inability to rapidly replenish blood calcium include:

- Calcium utilization by a large litter, with relation to the mother's body size.
- Poor diet during gestation (pregnancy).
- Heavy lactation for a large litter.
- Calcium supplementation before birth.
 - Supplemental calcium (above that which is found in a commercial diet) will disrupt the parathyroid system responsible for hormonally storing or utilizing calcium. Supplementation will trigger the body to store calcium, when it should be utilizing calcium.
 - Only supplement calcium after birth.

Symptoms of **hypocalcemia** include:

- Panting, pacing, restlessness
- Muscle stiffness or even an inability to rise
- Tremors, muscle contractions
- Seizures, coma

OBTAINING A DIAGNOSIS

Physical examination with relation to birthing often yields a presumptive diagnosis.

A definitive diagnosis is made with a simple in-house blood test. Most point-of-care machines will assess ionized calcium, although total calcium will suffice.

TREATMENT

Once symptoms develop, oral calcium supplementation is typically ineffective.

As an outpatient, mother's can be hospitalized and provided intravenous (IV) calcium supplementation. Many require several injections, slowly, while monitoring the heart (electrocardiography) to prevent cardiac complications.

As blood calcium returns to normal, most symptoms will resolve.

Following discharge from the hospital (typically within a few hours), patients must be started on a daily calcium supplement. Typically, an oral calcium carbonate antacid (Tums® Ultra) is the most effective at supplying elemental calcium.

TIPS FOR SUCCESS

- DO NOT SUPPLEMENT CALCIUM UNTIL THE DAY OF BIRTH.
- Always place pregnant patients on a higher calorie food (puppy/kitten food).
- Reduce milk burden by supplementing a few feedings per day with milk replacer in large-litter situations.