

Canine Hypoparathyroidism

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Canine hypoparathyroidism is a relatively uncommon hormonal imbalance in [dogs](#). It results from the end of production of parathyroid hormone (PTH). Hypoparathyroidism appears more common in middle-aged, female dogs. It has no breed predilection¹.

What is parathyroid hormone (PTH)?

PTH is manufactured within the dog's four [parathyroid glands](#). These tiny glands are embedded within the two thyroid glands (two parathyroid glands per thyroid gland). All of these glands are located on the underside of the neck just beneath the [skin's](#) surface.

PTH is in charge of regulating [blood](#) calcium and phosphorus levels. It does so by modifying the amounts of calcium and phosphorus absorbed by the gastrointestinal tract, eliminated via the [kidneys](#) and released from [bones](#) into the bloodstream.

The results of hypoparathyroidism (too little PTH produced by the parathyroid glands) are a decrease in blood calcium and an increase in blood phosphorus levels. The opposite occurs when the parathyroid glands are producing too much PTH (hyperparathyroidism).

Causes of hypoparathyroidism

It is unknown why the parathyroid glands quit producing PTH. Immune-mediated destruction of the parathyroid glands (the immune system attacks the body's own tissues) is suspected. [Surgical](#) removal of the thyroid glands for treatment of thyroid [cancer](#) and trauma to the neck region are other potential causes of hypoparathyroidism.

Symptoms of hypoparathyroidism

The symptoms associated with hypoparathyroidism are the result of the abnormally low blood calcium level. The symptoms can be intermittent, particularly early on in the course of the [disease](#). The most common symptoms include:

- [Muscle tremors or twitching](#)
- Stiff gait
- Uncoordinated gait
- Anxious, restless behavior
- [Seizures](#)
- [Lethargy/weakness](#)
- [Increased panting](#)
- [Loss of appetite](#)

Diagnosis of hypoparathyroidism

The testing typically performed to arrive at a diagnosis of hypoparathyroidism includes:

- Complete blood cell count
- Blood chemistry profile (includes calcium and phosphorus measurements)
- Ionized calcium measurement
- Urinalysis
- PTH measurement

Treatment of hypoparathyroidism

Therapy for hypoparathyroidism consists of administration of vitamin D and calcium. Vitamin D supplementation is necessary to assist with the absorption of dietary calcium from the gastrointestinal tract.

Treatment with intravenous fluids and calcium is warranted for dogs with severe symptoms. For dogs who are in stable condition, the calcium and vitamin D can be administered orally at home. Both are given daily (may be multiple times daily) and the dosages are adjusted based on the dog's symptoms as well as follow up blood calcium and phosphorus levels. As is the case with most canine hormonal imbalances, lifelong treatment is required.

Prognosis of hypoparathyroidism

With appropriate treatment and conscientious monitoring on the home front as well as by a veterinarian, the prognosis for canine hypoparathyroidism is excellent.

Questions to ask your veterinarian

- Do we know with certainty if my dog has hypoparathyroidism?
- What are other possible causes of my dog's symptoms?

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- Is my dog stable enough to be treated at home or should treatment be administered in the hospital?
- How frequently should my dog's blood calcium and phosphorus levels be measured?

1. [DS, Bruyette, and Feldman EC. "Primary Hypoparathyroidism in the Dog. Report of 15 Cases and Review of 13 Previously Reported Cases." National Center for Biotechnology Information. U.S. National Library of Medicine. n.d. Web. 27 Mar. 2015.](#)