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Panosteitis in Dogs

What is panosteitis?

"Panosteitis is sometimes called growing pains."

Panosteitis is a painful inflammation of the outer surface or shaft of one or more long bones of the legs. It is sometimes called "growing pains." Panosteitis may occur in more than one bone at a time or may move around from area to area, cause a "shifting" lameness that goes from one bone or leg to another. The lameness tends to occur very suddenly and usually occurs spontaneously, or without a history of trauma or excessive exercise.

Are all dogs affected with this condition?

Panosteitis is a condition that affects young, rapidly growing dogs. Although it can occur in any breed of dog, larger breeds, such as German Shepherds (most common), Great Danes, Golden Retrievers, Labrador Retrievers, Rottweilers, Doberman Pinschers, and Basset Hounds, are more prone to this problem. Affected dogs are usually between 5 and 14 months of age, but the first symptoms may occur as early as 2 months of age or as late as 18 months of age. Males seem to be affected more often than females, although either sex can develop panosteitis. Affected dogs often have recurrent episodes of panosteitis until they reach 2 years of age, at which time it will spontaneously resolve.

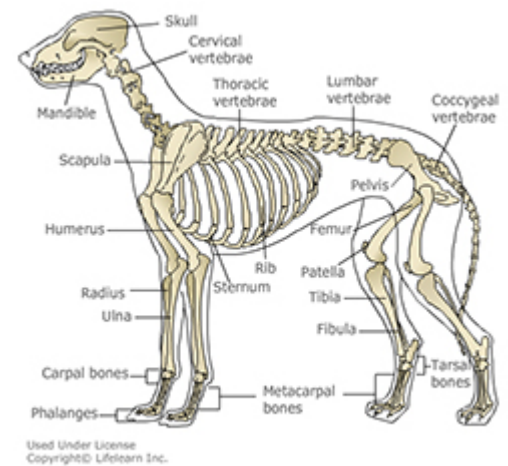
What is the cause?

Panosteitis is a painful condition, and the pain is likely caused by increased pressure within the bone, and/or by stimulation of pain receptors in the periosteum, or outer, soft tissue lining of the bone. The underlying cause of panosteitis is unknown, but genetics, stress, infection, metabolism, or an autoimmune component may be factors. Since German Shepherds seem to be particularly predisposed to panosteitis, there may be a genetic component to the disease, at least in this breed. It has also been suggested that rapid growth and high-protein, high-calcium diets may predispose some dogs to this condition.

What are the clinical signs?

The typical symptom is a sudden, unexplained, painful lameness of one or more legs. The lameness may be mild or severe. The most common bone that is affected is the humerus (upper arm), but panosteitis may also be found in the radius and ulna (the foreleg), the femur (thigh) and/or the tibia (lower rear leg). The affected bone will be painful to the touch. Other symptoms such as fever, anorexia, lethargy, or weight loss may be noticed.

Panosteitis tends to have a cyclic nature, with periods of worsening symptoms followed by periods of improvement. The pain often shifts from leg to leg. Each episode of lameness may last for a few days to a few weeks, and the period between episodes is often about a month, but may vary.



How is it diagnosed?

When your veterinarian examines your dog, panosteitis will be suspected if the patient shows pain when pressure is applied to the affected bone(s). The diagnosis is confirmed by radiographs or x-rays, which usually show a characteristic increase in the density of the affected bones. The degree of change may not correlate to the severity of the lameness. In some cases, radiographic evidence may not be present for up to ten days after lameness begins; in these cases, repeat x-rays taken 2 weeks later will confirm the diagnosis. After the condition has resolved, the bone density normalizes and the bone looks normal on radiographs.

What is the treatment?



Although this disease is self-limiting, and will spontaneously resolve, during episodes of lameness the condition is very painful. At these times, treatment is supportive, using analgesics (pain medications) and/or anti-inflammatory drugs as needed.

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During episodes of lameness, exercise should be restricted. Between episodes, light to moderate exercise should be encouraged, but hard or vigorous exercise is discouraged, as are very long walks.

Some dogs with panosteitis have a poor appetite; in these cases, it is important to ensure that they are given a properly balanced and palatable diet. In some cases, supplements such as nutraceuticals, Omega fatty acids or antioxidants such as Vitamin C may be helpful.

What is the prognosis?

Panosteitis is a self-limiting disease, meaning that it will eventually go away. The disease should be completely resolved by the time the dog reaches 18–24 months of age. Each episode of lameness should last no longer than 3 weeks; if your pet's lameness persists without relief for longer than 4–5 weeks, it is likely that the dog is affected with another bone disorder (see our handout on Bone Diseases of Growing Dogs for further information).

If panosteitis is a self-limiting disease, why is it necessary to perform diagnostic procedures such as radiographs?

Although panosteitis is not a serious disease, and is a common cause of lameness, other, more serious bone diseases can cause lameness in young dogs. In order to be sure that a sudden onset of lameness is not caused by one of these more serious bone diseases, radiographs must be taken. If the radiographs show the typical lesions of panosteitis, then you can rest assured that your dog will eventually outgrow the problem.

Are there any preventive measures I can take to prevent panosteitis in my large breed dog?

"Feeding a food specifically formulated for use in large breed puppies is the single most important thing you can do to prevent panosteitis."

Feeding a food that has been specifically formulated for use in large breed puppies is the single most important thing you can do to prevent panosteitis. It is also important to restrict the quantity fed to keep your dog at a lean, healthy body weight. Do not allow your puppy to become overweight. Many "treatments" for panosteitis are available on the internet, but none of these are proven effective and some may even be harmful to your puppy. Consult your veterinarian for further advice on the most appropriate treatment for your dog.

This client information sheet is based on material written by: Cheryl Yuill, DVM, MSc, CVH

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