

Weight Bearing After Amputation

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In the Literature

Cole GL, D Millis. The effect of limb amputation on standing weight distribution in the remaining three limbs in dogs. *Vet Comp Orthop Traumatol*. 2017;30(1):59-61.

FROM THE PAGE ...

This study evaluated standing weight in patients that had previously undergone thoracic limb or pelvic limb amputation. The evaluators used a commercial stance analyzer. As compared with standard force plates, which are used in other methods to evaluate gait kinetics, stance analyzers require less skill for collecting data, use less space, and are less costly.

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MORE PROTECTION
THAN HEARTGARD® PLUS
(ivermectin/pyrantel)*



Heartworm disease



Hookworm (*A. caninum*)



Roundworm

INDICATIONS

Interceptor® Plus (milbemycin oxime/praziquantel) is indicated for the prevention of heartworm disease caused by *Dirofilaria immitis* and for the treatment and control of adult roundworm (*Toxocara canis*, *Toxascaris leonina*), adult hookworm (*Ancylostoma caninum*), adult whipworm (*Trichuris vulpis*) and adult tapeworm (*Taenia pisiformis*, *Echinococcus multilocularis*, *Echinococcus granulosus*) in dogs and puppies 6 weeks of age and older and 2 pounds of body weight or greater.

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Two groups of dogs were evaluated. One group comprised dogs with thoracic limb amputation ($n = 10$), and the other group comprised dogs with pelvic limb amputation ($n = 10$). Five trials of stance data were collected for each dog and compared with established normal, nonamputated values.

Dogs with thoracic limb amputation and dogs with pelvic limb amputation had the largest increase in weight bearing in the contralateral thoracic limb. The study suggested that a careful preoperative orthopedic and neurologic evaluation of the limbs is necessary and that long-term emphasis on preservation of the contralateral thoracic limb would be useful.

Multimodal adjunctive techniques¹ could help preserve joint and limb health in amputees. Analgesic and restorative therapies may include NSAIDs, extra-label adjunctive analgesics, physical rehabilitation, acupuncture, cold laser therapy, weight maintenance, stem cells or platelet-rich plasma, and/or emerging drug therapies.¹⁻³ Understanding these new modalities and the biomechanics of an amputee may help practitioners make more informed clinical decisions, in the same way that knowing which digits are primarily weight bearing can help when discussing prognosis about foot trauma or surgery with an owner.

... TO YOUR PATIENTS

Key pearls to put into practice:

- 1** If venous drug administration is needed in an amputee, clinicians should consider *not* using the contralateral thoracic limb.
- 2** If a pelvic limb amputee has orthopedic disease in the ipsilateral thoracic limb, both thoracic limbs should be assessed and treated to preserve the contralateral (primary weight-bearing) thoracic limb.
- 3** Clients should be educated about the importance of maintaining lean body weight, preserving joint health, and encouraging exercise for amputee patients that are comfortable and able. Also, assistance devices should be discussed, and patients should be referred for orthotics when necessary.

References

1. KuKanich B. Outpatient oral analgesics in dogs and cats beyond nonsteroidal antiinflammatory drugs: an evidence-based approach. *Vet Clin North Am Small Anim Pract.* 2013;43(5):1109-1125.
2. Rausch-Derra LC, Huebner M, Rhodes L. Evaluation of the safety of long-term, daily oral administration of grapiprant, a novel drug for treatment of osteoarthritic pain and inflammation, in healthy dogs. *Am J Vet Res.* 2015;76(10):853-859.
3. Upchurch DA, Renberg WC, Roush JK, Milliken GA, Weiss ML. Effects of administration of adipose-derived stromal vascular fraction and platelet-rich plasma to dogs with osteoarthritis of the hip joints. *Am J Vet Res.* 2016;77(9):940-951.



Whipworm



Tapeworm**

INTERCEPTOR[®]
PLUS
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Treatment with fewer than 6 monthly doses after the last exposure to mosquitoes may not provide complete heartworm prevention. Prior to administration of Interceptor Plus, dogs should be tested for existing heartworm infections. The safety of Interceptor Plus has not been evaluated in dogs used for breeding or in lactating females. The following adverse reactions have been reported in dogs after administration of milbemycin oxime or praziquantel: vomiting, diarrhea, depression/lethargy, ataxia, anorexia, convulsions, weakness, and salivation. Please see full product information on page 58.

*Heartgard Plus hookworm species: *Ancylostoma caninum*, *Uncinaria stenocephala*, *Ancylostoma braziliense*.
**(Taenia pisiformis, Echinococcus multilocularis and Echinococcus granulosus).