



VET TALK

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Galliprant for Canines with Osteoporosis

Imagine you're a golden retriever who has lived a wonderful life with your mom and dad. One day, your humans bring home a small little human who cries a lot and is really loud, but for some reason you love it and you want to play all day with it. As luck would have it, a year later the little human starts to play with you. You are the little human's best friend but something feels wrong. Your hip is starting to become stiff, you cannot jump as high, and you start to have pain when getting up to greet your little human. Your mom and dad take you to the vet and say that you have osteoarthritis, which is common in dogs. Life doesn't seem to be going your way until your vet recommends Galliprant®.

Galliprant® (grapiprant) is a prostaglandin E₂ (PGE₂) EP4 receptor antagonist; a non-cyclooxygenase (COX) inhibiting, non-steroidal anti-inflammatory drug (NSAID) indicated for the control of pain and inflammation associated with osteoarthritis in dogs greater than 9 months of age. Prostaglandins have a wide variety of physiologic effects. Prostaglandin E₂ (PGE₂) is a proteinoid that exerts its effects via four receptors, EP1, EP2, EP3, and EP4. PGE₂ is involved in mediating inflammatory pain, vasodilation, increasing vascular permeability; as well as gastrointestinal homeostasis, renal function, & reproductive function. The EP4 receptor mediates pain and inflammation specifically in regards to osteoarthritis. Galliprant blocks PGE₂-elicited pain and inflammation by antagonizing the EP4 receptor. In the hearts of dogs, EP4 receptors are abundant. However, the clinical relevance is unknown. Therefore, Galliprant is known for targeting the source of osteoarthritis pain and inflammation while reducing the impact on GI, kidney and liver homeostasis. It is rapidly absorbed following an oral dose. However, intake of the tablet with food significantly reduces the oral bioavailability. According to a prospective, randomized, masked, placebo-controlled, 16-site clinical trial, Galliprant treatment resulted in significant improvements in pain interference and pain severity scores compared to placebo on days 7, 14, 21, and 28¹.

Galliprant is available in a 20 mg, 60 mg, and 100 mg flavored, oval biconvex, beige to brown in color, scored tablet that contains grapiprant and desiccated pork liver as the flavoring agent. Galliprant has weight-based dosing of 0.9 mg/lb (2 mg/kg) once daily with the dosage calculated in half-tablet increments*. Dogs less than 8 pounds (3.6 kgs) cannot be accurately dosed. Galliprant should not be used if dogs that have a hypersensitivity to grapiprant. As of right now, it's not for use in humans and it is for use in dogs only. This

medication should be kept out of reach of children and pets. The safe use of Galliprant has not been evaluated in dogs younger than 9 months and less than 8 pounds, dogs used for breeding or in pregnant or lactating dogs. Some common side effects that have been seen may include vomiting, diarrhea, decreased appetite, mucoid, watery or blood stools, and decreases in serum albumin and total protein. Concurrent use with other anti-inflammatory drugs has not been studied, thus use with other cox-inhibiting NSAIDs or corticosteroids should be avoided.

*Dosing Table below

Dose	Weight in pounds	Weight in kilograms	20 mg tablet	60 mg tablet	100 mg tablet
0.9 mg/lb (2 mg/kg) once daily	8-15	3.6-6.8	0.5		
	15.1-30	6.9-13.6	1		
	30.1-45	13.7-20.4		0.5	
	45.1-75	20.5-34		1	
	75.1-150	34.1-68			1
	150.1-220	68.1-100			2

Adapted from: Galliprant® Package Insert

Rausch-Derra, L., Huebner, M., Wofford, J., et al. 2016. "A prospective, randomized, masked, placebo-controlled multisite clinical study of grapiprant, an EP4 prostaglandin receptor antagonist (PRA), in dogs with osteoarthritis." J. Vet. Int. Med. 30: 756-763.

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