



# Joint supplements for dogs: The helpful vs. the hype

There's a lot of crazy info out there when it comes to canine joint health and mobility. (Elk antler, anyone?) Arm yourself with the evidence and position your veterinary practice as the trusted source of reliable data. By Sarah J. Wooten, DVM

**W**hether their dogs are old and stiff, young and developing, or couch potatoes, pet owners tend to be highly concerned about canine joints. They're searching online for information on mobility and arthritis, asking each other for recommendations, or going with what's been recommended by their own doctor.

Chances are they've already come to you with questions about things like hyper-immune milk factor and *Boswellia serrata*, but how do you begin to shed light on the veiled world of nutraceuticals? How much to give? How often? What brand? Glucosamine-enriched dog food or shark cartilage supplement? What is truth? What is "claim"? So many questions.

Fortunately, when it comes to evidence-based use of joint supplements in dogs, Fetch dvm360 conference speaker

Matt Brunke, DVM, CCRP, CVPP, CVA, has the answers. You know pet owners are going to ask you for your opinion. Why not be the expert?

## Dr. Brunke's guide to oral joint supplements

Here's a rundown of the joint supplements getting the most buzz in the pet world these days.

**Glucosamine hydrochloride.** Glucosamine hydrochloride is an amino sugar, but it's not involved in the glucose pathway. It's a building block of the cartilage matrix and stimulates growth of cartilage cells. Glucosamine is readily available, cheap and can be given safely to diabetic patients, Dr. Brunke says.



# Identifying and treating 3 tick-borne diseases in dogs

Diagnosis of canine tick-related disease has been occurring with greater frequency, making knowledge of all tick-borne diseases increasingly important. This detailed overview of anaplasmosis, ehrlichiosis and Rocky Mountain spotted fever will help you be prepared when these diseases make an appearance in your veterinary clinic. By Mary Bowles, DVM, DACVIM

**A**naplasmosis, ehrlichiosis and Rocky Mountain spotted fever (RMSF) are three tick-borne diseases commonly diagnosed in dogs. *Ehrlichia canis*, *Ehrlichia chaffeensis* and *Ehrlichia ewingii* cause ehrlichiosis. These organisms belong to the family Anaplasmataceae along with *Anaplasma platys* and *Anaplasma phagocytophilum*, which cause anaplasmosis. RMSF is caused by the organism *Rickettsia rickettsii* (Table 1, below).

With any of these diseases, co-infections with more than one type of tick-borne organism is possible, potentially altering the signs of illness in the affected patient. It is also possible for patients to be infected with any of these tick-borne diseases but have a predominance of signs related to co-existing non-tick-borne disease.



# Blast those masts! Conquering mast cell tumors in your veterinary patients

Before you give in to that sinking feeling while staring at the cytology slide, review the latest on diagnostic and treatment options for this common form of cancer. Sue Ettinger, DVM, DACVIM (oncology)

**Y**our patient has a nasty red nodule on its muzzle. You poke it with a needle and it gets all pissed off.

[Insert expletive here.]

Even before you look at the slide, you know you're going to see a bunch of degranulated, angry mast cells surrounded by those purplish granules. Now what? Staging? Straight to surgery before staging? Referral?

First, calm down. Let's review.

Mast cell tumors are the most common cutaneous tumor in dogs, accounting for 16% to 21% of skin tumors.<sup>1</sup> Risk factors include age (there's a higher incidence in older dogs) and breed (boxers, Boston terriers, Labradors, beagles and schnauzers are at higher risk). The cause of mast cell tumors is still largely unknown.

Mast cell tumors are most common in dermal and subcutaneous tissues. Up to 60% of mast cell tumors show up on the trunk and 25% on the limbs, with the head and neck the least common sites. Tumors have a varied appearance. They are typically solitary, but 11% to 22% of cases involve multiple lesions.<sup>1,2</sup>

The way a mast cell tumor looks to your naked eye in the exam room correlates well with how it looks on a slide. Well-differentiated mast cell tumors are typically single, 1 to 4 cm in diameter, slow-growing, rubbery, non-ulcerated and alopecic. They're most common in dogs older than 6 months of age. Undifferentiated mast cell tumors are large, rapidly growing, ulcerated and irritated. The surrounding tissue is edematous and inflamed, and small satellite nodules may be present.

# Canine liver enzymes—so many questions!



Has the alphabet soup of liver enzyme activities got you stumped? Dr. Jonathan Lidbury answers common questions on interpreting canine liver laboratory results and gives guidance on how to proceed with confirming a diagnosis, including when to perform a liver biopsy.

By Jennifer Gaumnitz, Senior Content Specialist

**A**s you all too readily know, increased serum liver enzyme activities are common in dogs and are, quite often, a diagnostic challenge. In a recent Fetch dvm360 session, Jonathan Lidbury, BVMS, MRCVS, PhD, DACVIM, DECVIM, said "Increased liver enzymes are a big cause of consternation and confusion among all of us. We have to deal with them all of the time. They're one of the most common laboratory abnormalities of all."

Sometimes increased serum liver enzyme activities occur because the patient does have primary hepatobiliary disease, but sometimes they are secondary to extrahepatic disease. And to confound results even more, tissues other than the liver also produce these enzymes. The liver plays a major role in the metabolism and excretion of drugs and exogenous and endogenous toxins, so it's susceptible to

injury from toxins and from diseases in other parts of the body. Plus, increased liver enzyme activities can occur from benign processes (e.g. hepatic nodular hyperplasia) or from conditions that are progressive and require early intervention for the best outcome (e.g. chronic hepatitis).

Performing extensive diagnostic evaluation, including liver biopsy, is costly and clients may be either reluctant or unable to proceed. It can be difficult to know how aggressively to work up these dogs. Dr. Lidbury says that if the cause of the elevated activity is a primary liver disease like chronic hepatitis or a liver tumor, the workup can escalate up to the need to perform a liver biopsy fairly quickly. Contrast that with extrahepatic causes. "Sometimes, especially for mild elevations in alkaline phosphatase (ALP), benign neglect may be the best course of action," he says.

# Alternatives for the opioid shortage, or Simbadol saves the day



Fear of human drug abuse has affected our work in veterinary hospitals. Here are some alternatives to opioids you should use whether or not we ever get our preferred pain relief drugs back.

By Michael Petty, DVM, CVPP, CVMA, CCRT, CAAPM

Once again, veterinary medicine has been left in the lurch as the availability of opioids has withered due to a DEA-mandated decrease in their production. Although the DEA's intentions are good in trying to reduce the access to these addictive drugs, this move has the appearance of shorting the veterinary profession while our human anesthesiologists get to treat their patients as usual. We're forced to rely on veterinary-label opioids still available to us. But a shortage like this is a great time to consider other pain treatments and how they fit into your practice now—or even in a future of plentiful opioids.

We can survive this and any future shortage by using the opioids available to us—namely, butorphanol and the brand name buprenorphine product, Simbadol. Why are these opioids still available? Thankfully,

Zoetis has a license to produce these products for veterinary use. This means they have not been subject to the decreased production affecting those opioids that are human generics.

## In business with butorphanol

Butorphanol is an opioid with extremely short pain-relieving actions, sometimes as little as 15 minutes, but with a longer sedating action. This sedation has led to confusion about the actual duration of pain-relieving properties. On top of this, it's not a "strong" opioid and is insufficient for any procedure that is more than mildly painful. This narrows the opportunities where butorphanol may be used, but in the right circumstances it can do an adequate job *and* keep you from using stronger opioids you've got left in stock, saving them for more painful procedures.

