

Pala-Tech's Canine Joint Health products are a comprehensive musculoskeletal supplement, not just a joint capsule supplement, since the formulation includes glucosamine, creatine and MSM. Broader clinical benefits, a choice of dosage forms (soft chew treats, granules or chewable tablets) and guaranteed palatability makes Pala-Tech's Canine Joint Health brand a logical choice for canine joint health supplementation.



Dog's Name: _____

Dosing Directions: _____

Clinic Contact:

 Pala-Tech™ Laboratories, Inc.

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Help Keep Your Dog Active and Healthy



Pala-Tech™ Canine Joint Health Supplements

(Glucosamine Hydrochloride, Creatine & MSM)

Dogs enjoy running, playing, walking, jumping and being active in their daily life. To ensure this activity and the well-being of your dog, it is important to keep all of your dog's joints healthy. To help maintain the fluidity and wellness of the hip, knee, shoulder, elbow and hock joint, nutritional supplements with key beneficial ingredients can be administered to your dog. The dog's genetics, activity level, nutrition and other elements will determine at what age your dog would benefit most from the administration of a joint health supplement. Your veterinarian is the ideal person to help you determine when to begin using a joint health supplement, so work with them to make the best decision for your dog's health.

Pala-Tech's Canine Joint Health products have been formulated to provide three essential ingredients to maximize the clinical benefit for managing joint health conditions in dogs. These three key nutrients are glucosamine hydrochloride, creatine monohydrate and methylsulfonylmethane (MSM). What does each of these ingredients do for the dog's joint health and why doesn't the product include chondroitin sulfate?

Glucosamine Hydrochloride

Glucosamine is necessary for the construction of connective tissue as a precursor and stimulant of proteoglycan synthesis (part of the cartilage matrix in all joints).

It also inhibits the degradation of proteoglycans and possesses anti-inflammatory properties. Glucosamine helps the body maintain and replenish healthy cartilage and return viscosity to the joint's synovial fluid. It can stimulate the production of new connective tissues within the joint, as well as repair the damage caused to the joint over time and/or by exercise.

Glucosamine hydrochloride is the preferred form of glucosamine to use versus glucosamine sulfate. Hydrochloride provides more glucosamine by weight (81% glucosamine in hydrochloride versus 64% glucosamine in sulfate) and is two times more bioavailable than the sulfate form. This means the hydrochloride form is absorbed much better by the dog and will provide more benefit to the dog's joints...it will get to where it is needed to perform. Therefore, if you use the sulfate form of glucosamine in a joint health supplement, you would have to provide more than 2X more glucosamine sulfate than glucosamine hydrochloride to deliver the same amount of glucosamine to the dog's joints.

Creatine Monohydrate

Creatine is necessary for the manufacture of energy required to fuel the contraction of muscle.

Creatine helps to recycle and replenish energy in the muscles and enhance muscle performance. Strengthening and providing energy to muscles surrounding the dog's joints will help provide ample support to the joint, thus benefiting an older animal with arthritic joints. Supplemental creatine will benefit the dog by increasing muscle strength and performance, enhance endurance and provide additional energy. By including creatine in our joint health formulas, **all Pala-Tech formulations are comprehensive musculoskeletal supplements, not just "joint" supplements.** This will provide your dog with multiple benefits and help your dog recover faster from injury to the joints.



Methylsulfonylmethane (MSM)

MSM is one of nature's sources of dietary sulfur, which is needed for the synthesis of vitamins, amino acids, immunoglobulins and chondroitin sulfate. Pala-Tech uses MSM as a source of sulfur because this ingredient is quickly and effectively absorbed and transported to the joint capsules, since the molecular size of MSM is very small. In addition, it has been shown that MSM, when used in combination with glucosamine, will increase the bioavailability of glucosamine, so there is a synergistic benefit.

Pala-Tech uses MSM as an alternative to chondroitin sulfate.

Since MSM is a small molecule, it is readily and rapidly absorbed and transported to all joint capsules. If the dog needs chondroitin sulfate, the MSM will provide the joint with the sulfur building blocks so the dog can make its own chondroitin sulfate, if that is what the joint needs. If the joint is not deficient in chondroitin sulfate, then the dog can use the MSM to make other sulfur containing nutrients, such as amino acids, vitamins and immunoglobulins. This way, the MSM is not wasted and provides broader benefits to the dog. On the other hand, the ingredient chondroitin sulfate is a relatively large molecule and the absorption from the stomach and the transport of this compound to the joint capsule is questionable. Also, if the joint is not deficient in chondroitin sulfate, what happens to this ingredient...it is not used by the dog and is therefore wasted. Therefore, Pala-Tech uses MSM instead of chondroitin sulfate, since it has broader clinical benefits and will be a beneficial ingredient for your dog.

