

Exclusive to Veterinary Practices

 **spryng**[®]
with OsteoCushion™ Technology

Move *freely*



Live *fully*



Restore life to their years

As a veterinarian you can help animals with debilitating lameness and joint issues return to an improved quality of life with Spryng™ with OsteoCushion™ Technology, an innovative injectable veterinary medical device. Spryng is a dispersion of collagen-elastin hydrogel microparticles (CEHM) engineered and designed to provide a bio-integrative scaffold in the affected joint.

Durable, sterile, and hydrated biomaterial that mimics natural tissue properties.



What is Spryng?

Spryng bioscaffolds, composed of naturally derived collagen, elastin, and a glycosaminoglycan, mimic the composition and mechanical properties of extracellular matrix. Spryng may promote a constructive remodeling of diseased synovial tissue to improve the biomechanics and mechanical homeostasis of the joint.



How is Spryng Different?

Spryng is an innovative biomaterial, a biologically derived hydrogel, made from purified natural materials. It is biocompatible with multiple tissues. Additionally, the proprietary manufacturing process sets Spryng apart with proprietary patent and trade secret protection involving multiple species and various applications.



Common Canine Indications for Spryng

- Cruciate Ligament Injury
- Elbow Dysplasia
- Hip Dysplasia
- Early onset to late stage osteoarthritis
- Osteochondritis Dessicans
- Post-surgical
- Preventative injections
- Legg-Calve Perthes Disease

How It's Used

Spryng is administered using a sterile needle inserted into the synovial space of an affected joint and is appropriate for use in synovial joints throughout the body. Spryng is a medical device, not a drug, and does not rely on pharmacologic, chemical, or metabolic action to achieve the intended effects.

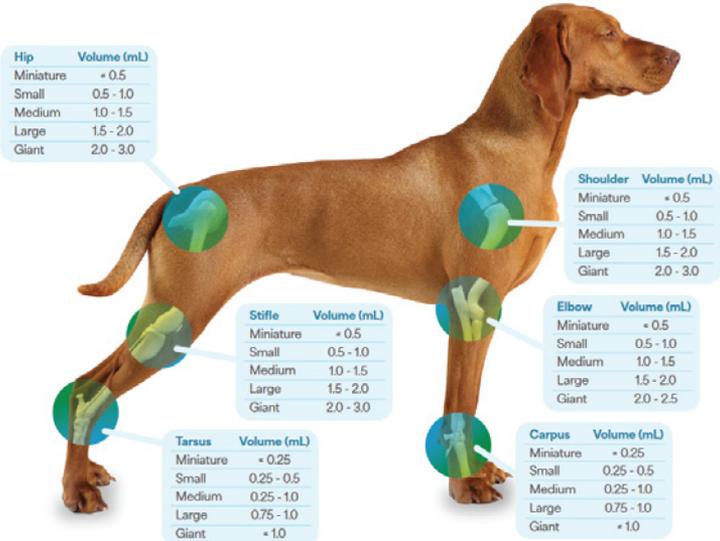
The injection technique, location, amount of synovial fluid removal, depth of injection, needle type, and the administered quantity of Spryng, may vary based on veterinarian clinical judgment and the joint selected.



Browse Spryng Training Videos:



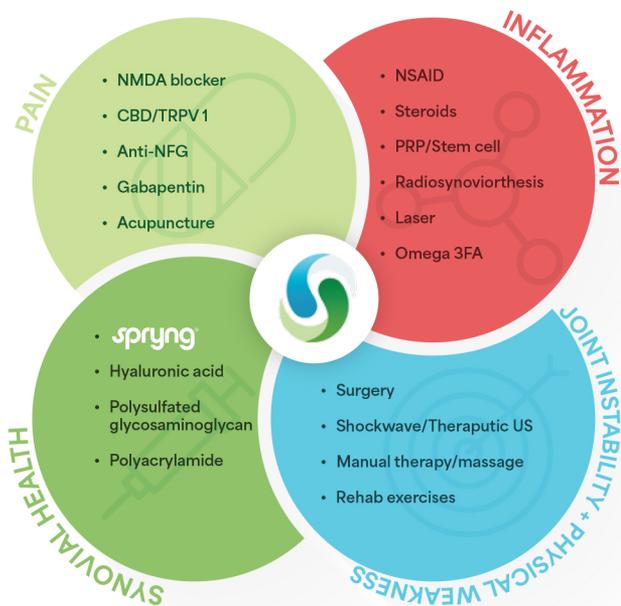
View the Canine Intra-Articular Injection Volume Guidelines here:



These values represent actual volumes of Spryng™ administered under clinical conditions by surveyed practitioners.

Spryng has been used with other products commonly used for osteoarthritis in canines and horses without known adverse effects. While Spryng is a primary tool for managing osteoarthritis, it is one of many excellent tools that should be used in a multi-modal approach.

Multimodal Considerations by Category



Understand how Spryng compares to and accompanies other options on the market.



Patient Journey

Treat Synovial Inflammation and OA Pain

Address Intra-Articular Health & Support Joint Function

- » **spryng** injection

Support Recovery

- » 2 weeks leash walking, minimize activity
- » Slow return to regular work/play

Strength and Maintenance

- » Weight management
- » Continued appropriate physical activity
- » Reevaluate mobility at the next annual exam

(many patients experience relief extending well beyond one year)



Watch Q&A with Dr. Tracy Turner

I recommend it to every veterinarian around the country. I think it's the product of the future. It's a product that needs to be in your tool chest.

– Dr. Tracy Turner DVM, MS, Dipl. ACVS, Dipl. ACVSMR



SUCCESS STORIES

Discover how Spryng promotes restoration of proper joint mechanics and mobility across a variety of patient presentations.



KODA

Medial Coronoid Disease



See Koda regain quality of life with Spryng

From complex case to success story, see how Scuba's care team did it

SCUBA

Partial CCL Tear



TRUMANSBURG

Hip Dysplasia



See Spryng's impact on Trumansburg's case



RESEARCH & RESOURCES



Spryng is a research-backed, proven enhancement to your multimodal approach to managing joint pain and osteoarthritis.

A single injection of Spryng's gel-like microparticles provides both immediate lubrication and long-term synovial structural support for improved joint health, unlike other products that only treat signs (NSAIDs, corticosteroids, monoclonal antibodies, radiation, and others.)

Many study animals no longer needed NSAIDs for pain relief and were able to return to normal activity levels following a Spryng injection.

The Effect of Collagen-Elastin Hydrogel Microparticles (CEHM) on Pain and Function Secondary to Hip Osteoarthritis in Dogs

Amalfitano A, Gaynor JS, Stewart SD. 2024 VOS Annual Conference, Lake Tahoe, CA, February 10-17, 2024.

Abstract: A Collagen-Elastin Hydrogel Microparticulate (CEHM), commercially known as Spryng, was evaluated as a potential option for hip osteoarthritis (OA) in dogs. A Simon's 2-stage design was used to assess safety and efficacy. Fourteen dogs with radiographic evidence of hip OA were enrolled. CEHM was injected into the affected hip(s)



under general anesthesia. Assessments included physical examination, lameness scoring, Canine Brief Pain Inventory (CBPI), Pain Trace, and goniometry, and were done at baseline and 28, 56, and 84 days post-injection. Nine dogs completed the study. At day 84, 77.8% of dogs had a significant reduction in CBPI score and improvement in hip extension. All dogs demonstrated improved lameness and quality of life. These findings suggest that CEHM is a promising and low-risk intra-articular option for addressing canine hip OA.

◀ [Read the abstract here](#)

Evaluating the Benefit and Tolerability of an Intra-Articular Injection of a Collagen-Elastin Hydrogel Microparticle (CEHM) Into the Stifle Joint of Dogs with Suspected Cruciate Ligament Rupture

Stewart SD, Thomson C, Kleeman E. 2023 ACVS Surgery Summit, Louisville, KY, October 12-14, 2023.

Abstract: Cranial cruciate disease (CCD) is a common canine orthopedic condition. While surgery remains the gold standard treatment, intra-articular therapies offer a non-surgical option. This study evaluated the efficacy and safety of a collagen-elastin hydrogel microparticle (CEHM) injection, commercially known as Spryng, in dogs with suspected CCD. A Simon's two-stage design was employed to assess the response rate, defined as a 25% or greater



reduction in the modified Glasgow Composite Pain Score (mGCPS) from baseline to day 28. Secondary endpoints included changes in visual lameness score (VLS) and Liverpool Osteoarthritis in Dogs (LOAD) survey scores. Results demonstrated a significant improvement in all clinical parameters, suggesting that CEHM may provide a viable non-surgical option for managing CCD in dogs.

◀ [View the poster here](#)

Tolerability of Intra-Articular Administration of Spryng™ in Healthy Cats

Reference: Clinical Study Assessing the Safety of Intra-Articular Administration of a Novel Micro-Particulate Biomaterial in the Management of Feline Osteoarthritis. Horter D, Kozlov S, Starek S. | Study Report No. FE-202211, PetVivo, Inc. 2023

This study evaluated the safety and tolerability of Spryng, a collagen-elastin hydrogel microparticulate (CEHM) biomaterial, when administered intra-articularly (IA) into multiple joints of healthy cats. Ten healthy female cats received IA injections of Spryng into their shoulder, hip, elbow, and stifle joints, with control joints receiving phosphate-buffered saline. Clinical observations, lameness scoring, joint swelling assessments, were conducted prior to injection and on days 1, 7, and 14 after each round of injections. Hematology, clinical chemistry, and coagulation profiles were also



monitored. Results demonstrated that Spryng injections were well-tolerated, with minimal to no adverse effects. There were no significant differences in joint swelling or pain between the Spryng and control groups. All monitored parameters remained within normal limits, indicating that Spryng is safe for IA administration in cats.

◀ [See the tech bulletin here](#)

Tolerability of Intra-Articular Administration of Spryng™ in Healthy Dogs

Reference: Clinical Study Assessing the Safety of Intra-Articular Administration of a Novel Micro-Particulate Biomaterial in the Management of Canine Osteoarthritis. Horter D, Kozlov S, Starek S. | Study Report No. CA-202209, PetVivo, Inc. 2023

This study evaluated the tolerability of Spryng, a collagen-elastin hydrogel microparticulate (CEHM) biomaterial, when administered intra-articularly (IA) into multiple joints of healthy dogs. Twenty healthy beagle dogs received IA injections of Spryng or saline placebo into their stifle, elbow, shoulder, and hip joints in a randomized, blinded fashion. Lameness scoring, joint swelling scoring, and circumference measurements of the stifle and elbow joints



were conducted on days 1, 7, and 14. Hematological and clinical chemistry parameters were monitored before and after each injection. Results demonstrated that Spryng injections were well-tolerated, with minimal to no adverse effects. There were no significant differences in joint swelling or pain between the Spryng and control groups. All monitored parameters remained within normal limits, indicating that Spryng is safe for IA administration in dogs.

◀ [View the tech bulletin here](#)