

JoPe.

FULLY UNDERSTANDING OSTEOARTHRITIS *to Better Care For Your Dog*



My dog has OA: What can I do to protect their mobility?

Although OA isn't reversible, **it isn't fatal**. Making sure your pet receives early, appropriate care will improve their joint mobility and quality of life.

Regardless of your dog's age, solutions are available!



Hi, Jope's friends!

We are Christine and Jeremy, two passionate veterinarians who made it their mission to help pets stay healthy, happy, and pain-free.

This **book came from personal experience, as we see more and more pet parents struggling to help their pets with OA feel better.** Also, I, Christine, had a dog called Pepsi who suffered from severe Osteoarthritis. Even though I am a veterinarian, I saw how hard it was for my mom and me to keep him comfortable and manage his OA. **So, we decided to write this book using my learning with Pepsi and what Jeremy and I learned over the years.** We share with you proactive ways to make your dog feel better, be pain-free and return to a more active lifestyle. We encourage a 360 approach, including lifestyle adaptations, diet, exercise, and natural and science-backed supplements.

Happy reading, and feel free to email us to share your story! We'd love to hear from you and your adorable pup(s)!

We made this book just for you and your dog. And this is what we'll cover!



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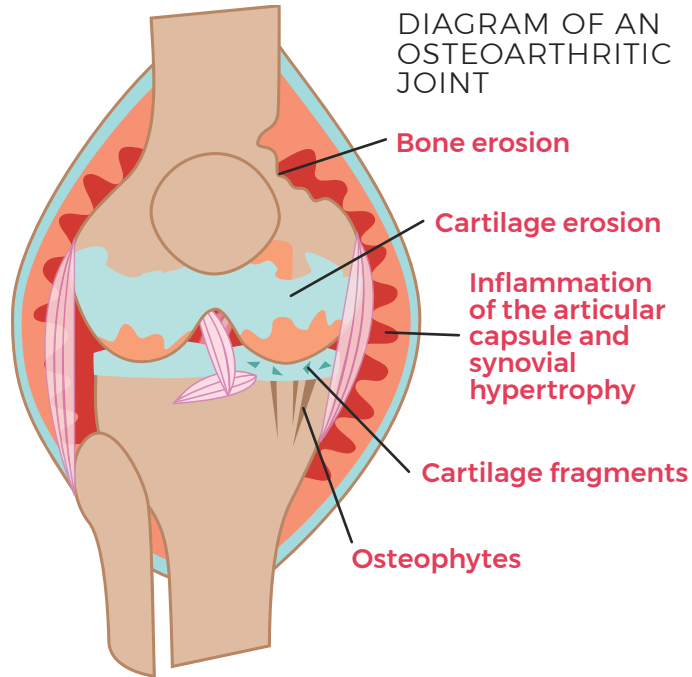
WHAT IS OA?

Osteoarthritis (OA) is a painful inflammatory joint disease that can lead to generalized pain, severe discomfort, leaving your dog hurting and sad.

- **OA causes the cartilage within your dog's joints to break down, failing to cushion and protect bones adequately.**
- **As a result, the underlying bone begins to change, and an inflammatory process begins.**

These bone changes usually develop slowly, and they tend to worsen over time as the inflammation progresses in your dog's body. Once the inflammation starts, it can evolve differently for every dog.

- **When OA develops gradually, it's called chronic OA.**
- **Sometimes, however, OA can appear suddenly, along with acute pain. This sudden appearance is called an acute OA crisis.**



OA is the number one cause of chronic pain in pets.^[1]

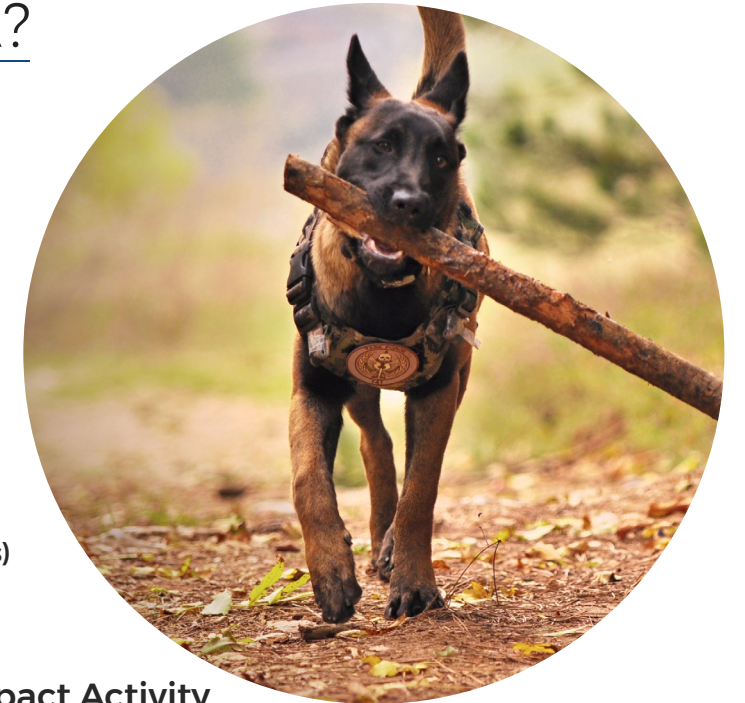
Facts

In the United States, **1 out of 5 dogs** of all ages suffer from OA. This percentage increases with age.^[2]



WHAT CAUSES OA?

-  **Malformed Joints** (e.g. hip dysplasia)
-  **Genetics**
-  **Trauma** (e.g. fractures, torn ligaments)
-  **Frequent or High-Impact Activity** (e.g. agility training, working roles, Canicross)
-  **Old Age**
-  **Overweight**
-  **Nutritional Imbalances and Deficiencies**



Consequence

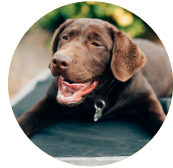
When OA is left untreated, a patient's quality of life decreases. **Thankfully, you can act now to help your dog.**

IS MY DOG AT RISK?

Here are the breeds that are most at risk⁽⁴⁾:



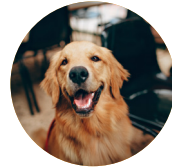
Collie



Labrador Retriever



Bobtail



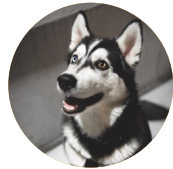
Golden Retriever



Rottweiler



German Shepherd



Siberian Husky



German Shorthaired Pointer

A 2018 UK study examining 4,196 dogs^[4] found that many breeds face an even higher risk of developing OA.

45%

of large- and giant-breed dogs face a high risk of developing OA^{*[3]}.



WHAT DO OA SYMPTOMS LOOK LIKE?

Some dogs might not express pain—even when they feel it. Therefore, to identify OA in your dog, you need to look for specific and subtle signs, including:

- Difficulty getting up and walking around in the morning.
- Lameness during or after a walk.
- Trouble getting in a car or using stairs.
- Playing less, seeming less excited to go out, and looking sad.



Stiffness



Difficulty with Stairs



Limping



Lethargy/Dullness

Total Score

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Stiffness						
Difficulty with Stairs						
Limping						
Lethargy/Dullness						
Total Score						

Watching out for these symptoms is key to tracking your dog's health and mobility. To monitor your dog's condition and progress use this calendar and note the following:

1. Each week, grade each symptom from 0 to 4 points: **0** — **1** — **2** — **3** — **4**
no symptoms (good) severe symptoms (bad)
2. Then, calculate your dog's total mobility score.

With the right care and treatment plan, you'll see your pet's score go down.

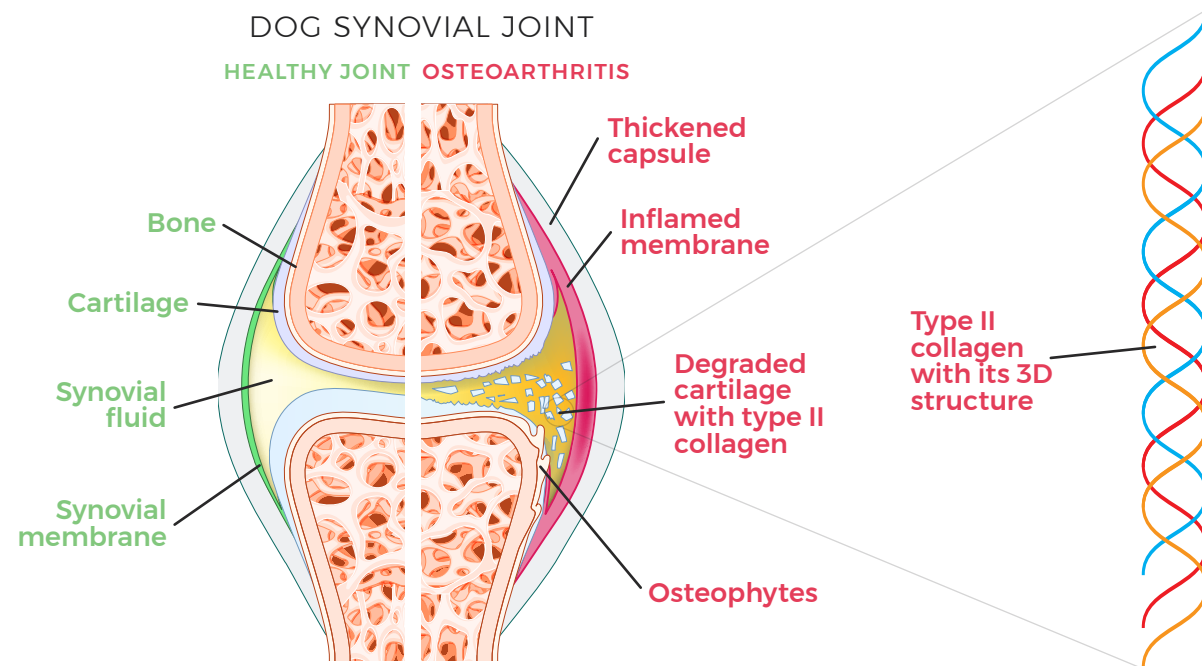
HOW DOES OA CAUSE PAIN?

To understand how OA starts and progresses, let's take a closer look at the cartilage during OA and the changes in the joint.

What is cartilage?

Joint cartilage is mainly composed of **water and type-II collagen**. Cells called chondrocytes produce these components. Because of its composition, cartilage is very pliable, **allowing the joints to move smoothly and painlessly**. But for pets **with OA, this cartilage is damaged**. As a result, it loses its flexible quality and can't act as a pillow between the bones.

Osteoarthritis changes a dog's bones and destroys their cartilage, leading to chronic inflammation and pain due to mechanical destruction. Chemical processes also fuel inflammation: inflammatory mediators produced during OA, such as cytokines, tumor necrosis factor-alpha (TNF[®]), and interleukins 1 and 6 (IL 1-6).



When both mechanical and chemical processes damage cartilage, it releases type-II collagen into the synovial fluid. The **body then reacts** to this type-II collagen that is now free in your dog's joint. Unfortunately, this collagen release causes chronic inflammation and further cartilage degradation. **As a result, your dog's mobility will decrease**, and pain can be felt when walking or getting around.

This inflammation becomes a vicious circle, causing chronic joint pain that radiates in the body, leaving your dog sad and painful.

Although OA is irreversible, you have options to relieve pain and make your dog feel better. With a bit of extra care, you can make your dog feel better, control the progression of their symptoms, and significantly improve their quality of life.

In the following section, let's see how you can help your pet!

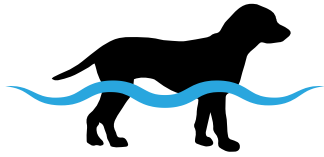


HOW CAN I MAKE MY ARTHRITIC DOG FEEL BETTER?

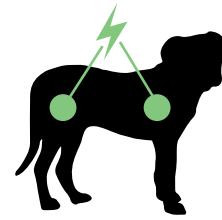
1. PHYSIOTHERAPY

Physiotherapy can help restore movement and function for both humans and dogs with OA. Also, you can make small, easy changes to your dog's surroundings to help prevent pain.

Physiotherapy: Working with your veterinarian



Hydrotherapy helps maintain or regain your dog's muscle mass while they lose weight. Pools and underwater treadmills are great options!

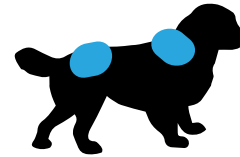


Electrostimulation therapy causes muscles to contract using electrical impulses, increasing your dog's muscle mass.



Physiotherapy : What you can do at home

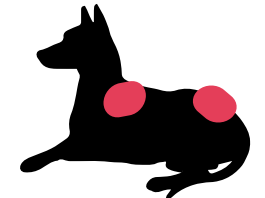
These different activities and treatments can be done between veterinary visits on daily basis. When practicing for the first time, you should do it with a veterinarian or a professional.



Cryotherapy applies cold pads to your pet's joints after physical activity, reducing inflammation.



Massage improves blood flow to your dog's muscles and reduces muscle tension.



Thermotherapy applies warm pads to your pet's joints to alleviate pain. You can use this option before a massage.



Active and passive leg movements can be performed with or without equipment. They help reduce tension and strengthen your dog's muscles.



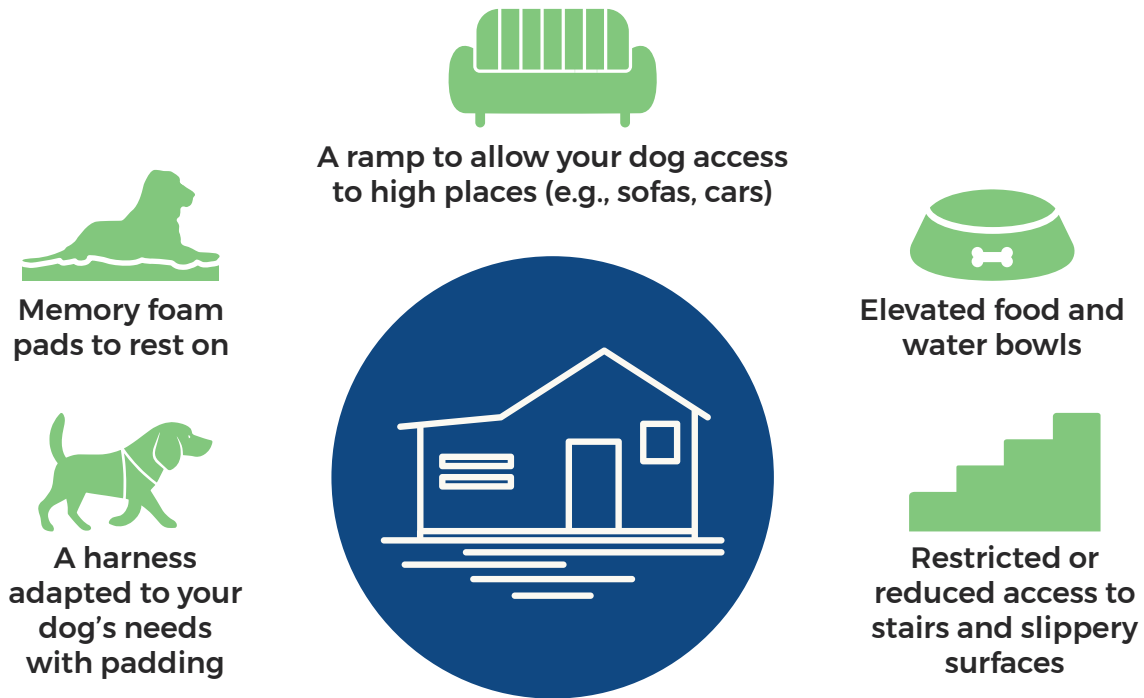
Looking for tips and videos about how you can manage your dog's OA at home?

Register here!

New content is coming soon.

2. EASY SURROUNDINGS CHANGES

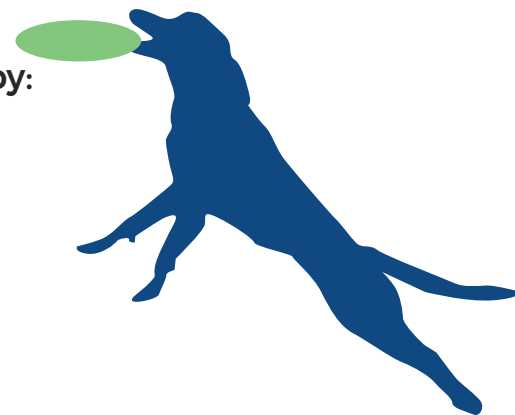
If your dog has OA, some simple changes to your home can make a big difference and help alleviate their pain, including:



3. MAINTAIN HEALTHY HABITS

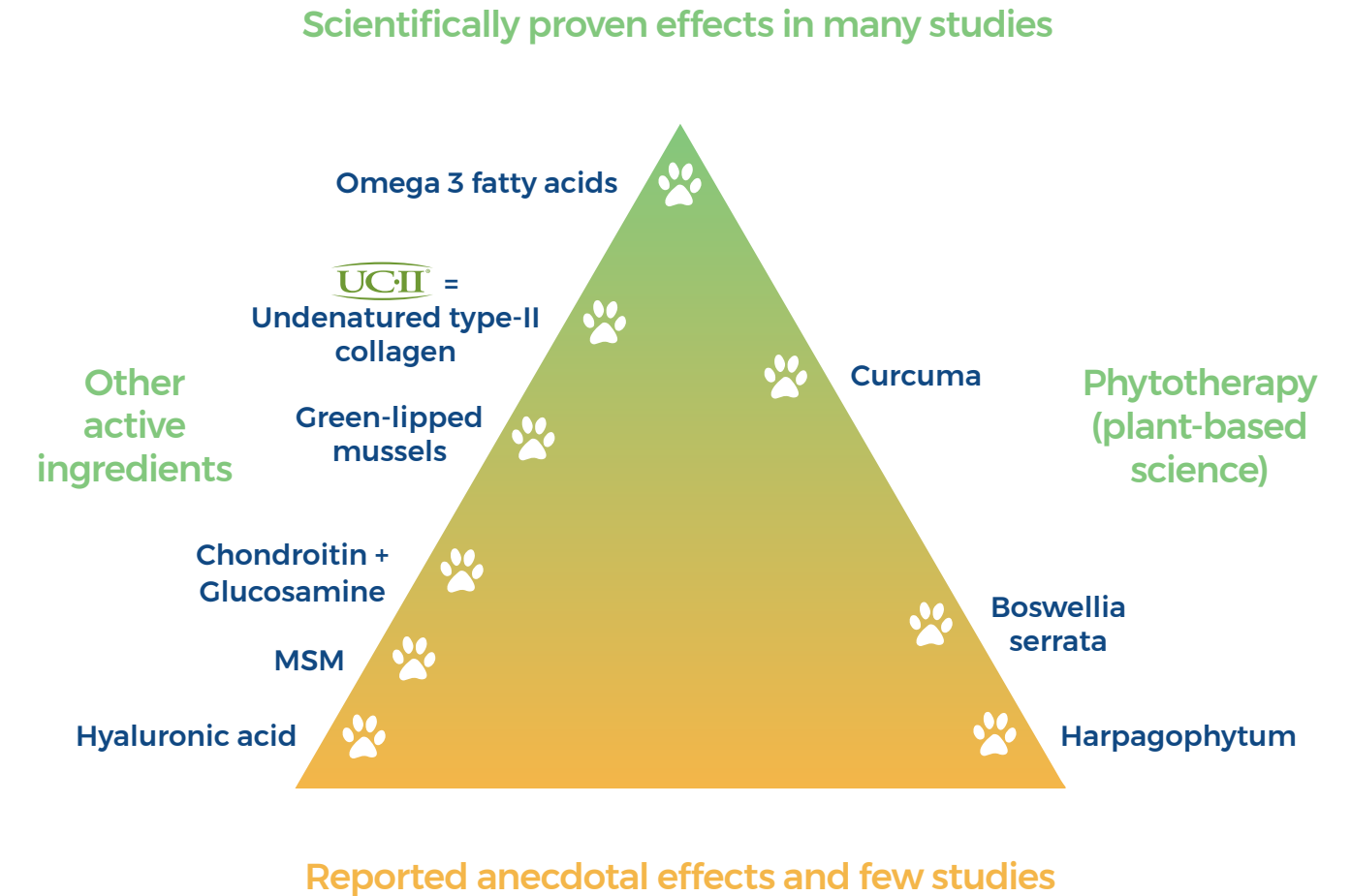
A healthy lifestyle will help manage your dog's OA by:

- Controlling your dog's weight (working with your veterinarian if needed).
- Maintaining regular daily activities adapted to your dog's needs - except during an acute OA crisis.



4. DIETARY SUPPLEMENTS

Dietary supplements—such as Omega 3 fatty acids and undenatured type-II collagen (UC-II®)—offer proven benefits for OA patients. Plus, they are natural and can be given daily to help improve your pet's health and quality of life. These supplements are safe for dogs of any age.



ARE CHONDROITIN AND GLUCOSAMINE GOOD TREATMENT CHOICES?



When it comes to joint supplements here are the facts:



The combination of chondroitin and glucosamine is by far the most popular choice.



However, the benefits of this combination are limited. Plus, the related studies are inconclusive, at best.

That's why veterinarians are using other molecules that offer proven benefits to improve your pet's joint health.

In 2017, a review of 18 studies^[5] about chondroitin and glucosamine was published. **The authors, who declared no conflicts of interest, concluded that the benefits of this combination were questionable** even though it didn't cause serious adverse effects. **No study has achieved an objective positive result supporting the use of glucosamine and chondroitin.**

However, Omega 3s and UC-II® have achieved objective positive results.



UNDENATURED TYPE II COLLAGEN (UC-II®): AN INNOVATIVE MOLECULE

Undenatured type II collagen (UC-II®) is an active ingredient found **naturally in cartilage**. Its unique extraction process is patented, and it allows the collagen to maintain a **specific 3D structure**. That's why it's called undenatured collagen. This 3D structure **reduces the inflammation** associated with OA through oral tolerance. Oral tolerance is a process unique to UC-II®, and it doesn't occur when taking denatured collagen (which uses a non-3D structure).

Only **UC-II®** ⁽²⁾ and **Omega 3s** have been objectively shown to decrease pain.



Note: Force platforms or force plates are instruments that measure the ground reaction forces generated by a body that stands or moves across them. These instruments are used to quantify balance, gait, and other biomechanical parameters. They're most commonly used in medicine and sports. This technique obtains objective measurements of pain levels in dogs with OA by evaluating how they distribute their weight when standing and walking.

Want to learn more about our life-changing dietary supplement? You can be the first to know when our UC-II® and Omega 3 product launches - early 2022!

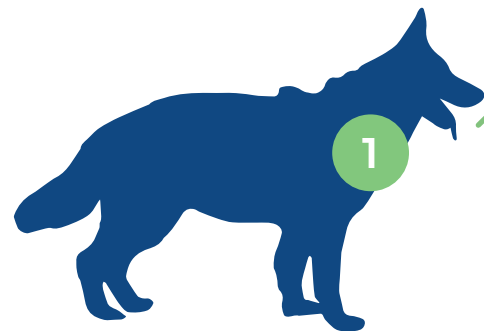
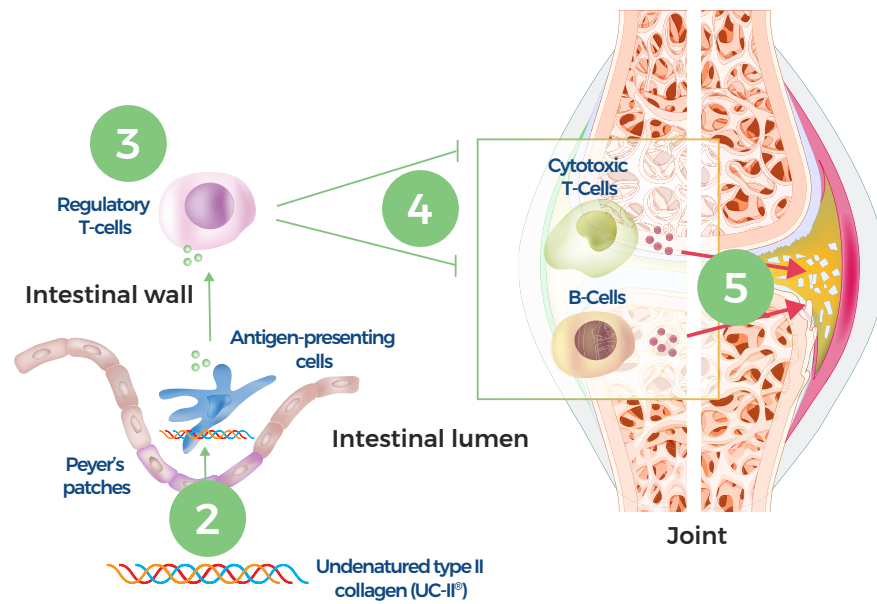
I'm interested!



HOW DOES UNDENATURED TYPE II COLLAGEN WORK?

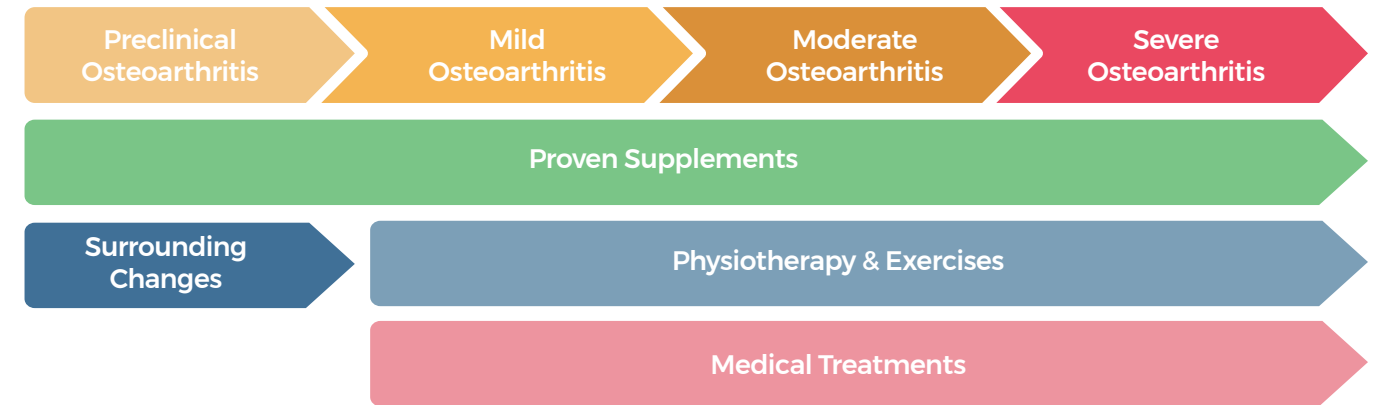
Oral tolerance is the process that allows Undenatured type II collagen to take effect and allows your dog's body to stop the vicious circle of OA inflammation and, more importantly, reduces pain. Undenatured type II collagen (UC-II®) supplements use a four-step process to fight inflammation on pain:

1. Your dog takes an undenatured type II collagen supplement with or without food.
2. Undenatured type II collagen arrives in the gut and cross intestine wall through Peyer's patches.
3. Antigenic-presenting cells recognize undenatured collagen and activates Regulatory T-cells.
4. Regulatory T-cells deactivate B-cells and Cytotoxic T-cells.
5. These cells stop producing proinflammatory mediators.



Undenatured type II collagen helps to stop inflammation's vicious circle and associated pain. It will limit dog's body reaction against its own type II collagen.

WHAT ELSE CAN I DO TO HELP MY DOG?



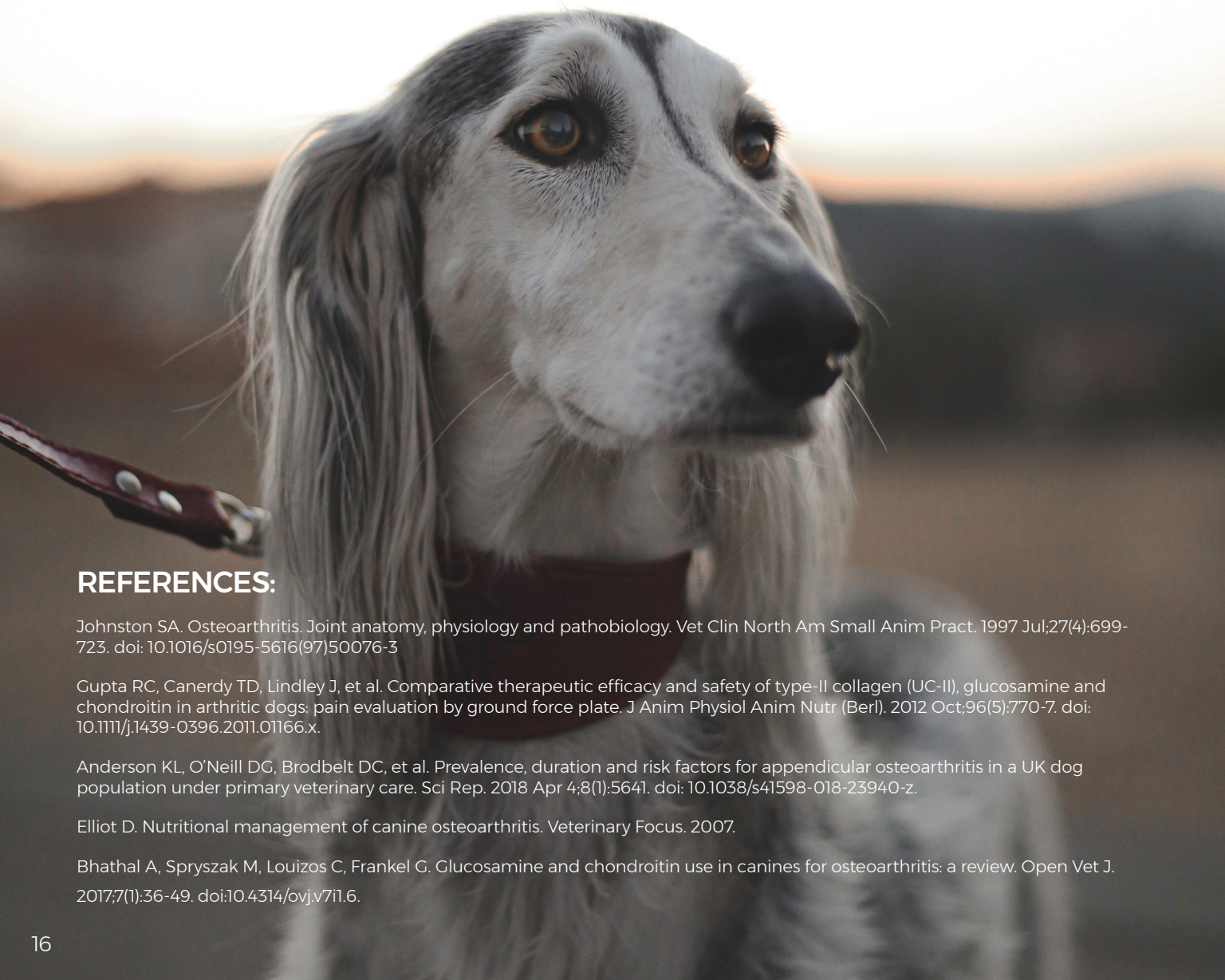
In some severe cases, you might need to add prescription medication to the UC-II® supplements, to control their OA pain and inflammation (NSAIDs, corticosteroids, painkillers, or monoclonal antibodies). Because these prescription products can have severe secondary effects, you will need regular veterinary follow-up, unlike Omega 3 and UC-II® supplements.

If you are doing everything we mentioned and feel like your dog is in pain, do not hesitate to check in with your veterinarian. Together, you will evaluate where you are and come up with some changes to the follow-up treatment for your dog.

Also, remember that OA is a chronic illness. Therefore, it's essential to consult with your veterinarian at any stage in their life. Take care to give your dog the treatments your vet prescribes, ensuring your dog gets the best treatment possible to live pain-free.



JoPe.



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