

Your Guide to Understanding

Canine Elbow Dysplasia

AQUACANINE
HYDRO & VETERINARY PHYSIO

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Canine Elbow Dysplasia

Canine Elbow Dysplasia is a degenerative condition affecting the elbow joint that commonly occurs in large-breed dogs. During the first year of life, elbow dysplasia can develop as a result of a variety of joint abnormalities, which will influence the treatment options available during the early stages of the condition. In older dogs, elbow dysplasia presents primarily as arthritis.

Elbow dysplasia is a degenerative condition that starts as incongruency within the elbow joint in the first year of a dog's life. In the early stages, surgical treatment may be necessary. In later stages, elbow dysplasia presents as arthritis of the joint and needs to be managed through a combination of diet, weight management, hydrotherapy, physical rehabilitation and environmental management.

Early diagnosis of canine elbow dysplasia will provide the best possible chance of effectively treating and managing the condition.

What is Elbow Dysplasia?

Many large-breed dogs such as Labrador retrievers have a genetic predisposition to developing elbow dysplasia, although small-breed dogs can also develop it. The elbow joint is made up of three bones; the humerus, the ulna and the radius. As young dogs grow, these bones may grow at different rates, leading to a joint surface that is not smooth. As a result, a small part of the bone might chip off in certain places as it is placed under too much stress during normal activity. This chip of bone can sit within the joint space and cause irritation, pain and further damage to the surface of the joint as the young dog moves and plays.

There are three ways in which elbow dysplasia might present in this stage, or three kinds of elbow dysplasia:

- Fragmented coronoid process
- Un-united anconeal process
- Osteochondritis of the humerus

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How does my dog get Elbow Dysplasia?

Dogs will usually develop elbow dysplasia in the first year of life as their bones grow. Factors that may contribute to the development of elbow dysplasia include:

- **Genetic predisposition:** Large-breed dogs such as the Labrador retriever have a higher genetic predisposition, increasing the risk that they can develop elbow dysplasia. While large breed dogs are at a higher risk, small breeds can also develop the condition. Responsible breeding programmes form a big part of the strategy to reduce the incidence of this condition.
- **High-impact activity:** Repetitive, excessive or high-impact activity at a young age can cause the coronoid process to fragment, or the anconeal process to fracture in young and developing dogs. It may also increase the risk of developing an osteochondrosis lesion. In young dogs predisposed to elbow dysplasia, avoid activities such as navigating stairs, jumping out of vehicles or off furniture. Avoiding high-impact activities, especially those that involve downward pressure and impact, will help protect the joints while they are still forming.

Other factors that can influence the development of elbow dysplasia include diet, growth rates of puppies, their environment, hormones and muscle mass.



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What happens to my dog's body when it has Elbow Dysplasia?

Canine Elbow Dysplasia might start in the elbows, but it has far-reaching effects throughout the body. Dogs carry 60% of their weight on their forelimbs and 40% on their hind limbs. This means that a condition like elbow dysplasia will have significantly more consequences for a dog than hip dysplasia might, simply because they carry most of their weight on these limbs.

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Painful areas in canine Elbow Dysplasia



Dogs that have elbow dysplasia will develop pain and tightness in certain muscles, as they change the way that they move, stand and recruit their muscles in response to the pain. If you place your hands on your dog, you may be able to feel tightness or knots in the muscles at some or all of the points shown in this image.

In a young dog, you are more likely to see behavioural signs than to feel a change in the muscle itself. Look for signs from your dog such as licking, suddenly looking at you, a change in breathing (they might hold their breath, or start panting), snapping at your hand or wanting to move away.

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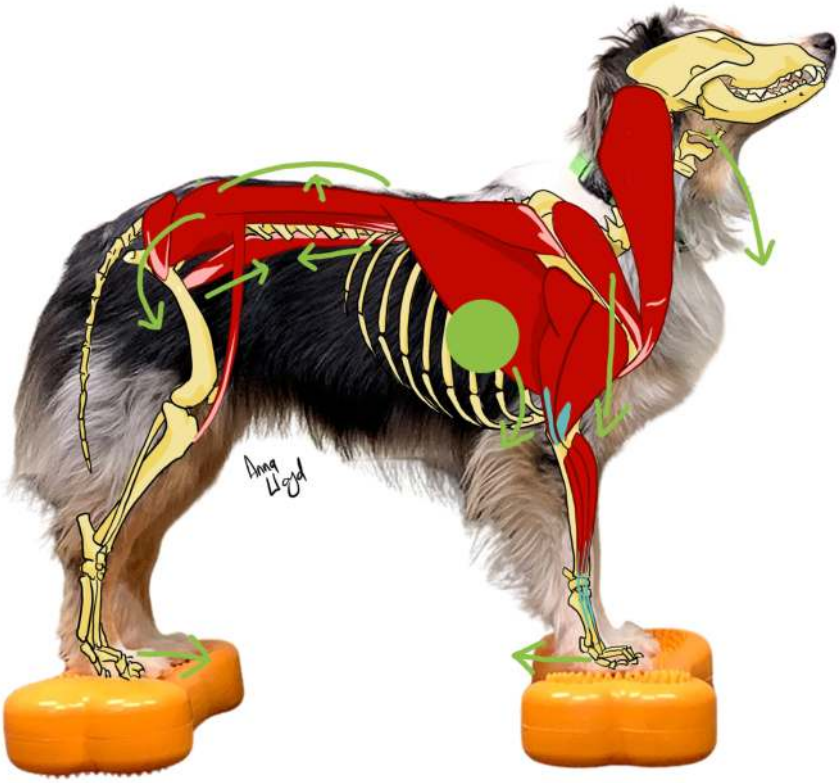
Common compensation patterns in canine Elbow Dysplasia



In a young dog, one of the earliest signs of elbow dysplasia is a mild lameness that comes and goes, or that might even shift from one foreleg to the other.

As your dog ages, you will also be able to see changes in their posture, including:

- a lowering of the head and neck;
- a shift of the hind and forelimbs to a position closer to the middle of the body;
- a rotation of the pelvis that will round the lower back and bring the hindlegs forward to support more weight;
- and a change in the angulation of the limbs as the joints bend more to bring the centre of mass closer to the ground.

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How can you help your dog with Elbow Dysplasia?

If you suspect that your dog has elbow dysplasia, speak to your vet to get a diagnosis for the condition. The earlier you identify elbow dysplasia, the more treatment options will be available and the more effective treatment will be.

Your veterinarian might recommend various treatment options, depending on the kind of elbow dysplasia and how far it has progressed in your dog. Options your vet might discuss include:

- **Surgical correction:** When elbow dysplasia is diagnosed in young dogs, surgery is often recommended to remove the loose piece of bone or cartilage from the joint. This is done to remove irritation and the source of pain from the joint, as well as to reduce the severity of future arthritis.

- **Intra-articular therapies:** Your veterinarian may recommend intra-articular therapies to help maintain the health of the joint surface and reduce pain. These could include a variety of different substances such as Platelet-rich plasma (PRP) and hyaluronic acid (HA). The role of each should be thoroughly explained to you.

- **Weight management and diet:** Maintaining your dog with elbow dysplasia at a lean body mass is essential to managing their elbow dysplasia. A joint support diet or the addition of supplements will help reduce inflammation and pain in the body and will slow the progression of arthritis.

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- **Pain control:** Your vet may recommend a variety of pain medications to use in the short or long term to help control the pain and inflammation your dog experiences.

- **Rehabilitation:** Rehabilitation can drastically improve the outcome for patients with this condition, and is recommended both before and after surgery for the best possible long-term outcome.

- **Hydrotherapy:** Hydrotherapy is a valuable form of active exercise that will increase the available range of motion of the elbow joint without loading it with weight. This is a valuable way to maintain and improve the health of the elbow joint.



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