

Arthritis Is A Pain In the Joints

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Introduction

The canine skeletal system is a marvel of bones, cartilage, and ligaments that provide the body with a framework to erect on four strong legs, protect internal organs, and provide a full range of motion. The muscles furnish the power to propel the dog into action, but without healthy bones, joints, and connective tissue, the muscles cannot do their job.

Joints — the skeletal hinges — give the skeleton flexibility for walking, trotting, running, jumping, climbing, and moving the head and neck to increase the field of vision. The dog's body has three types of joints: ball and socket such as the hip and shoulder joints; hinged joints such as the knees and elbows; and gliding or plane joints such as the wrists and ankles. The joints are lubricated for smooth action by synovial fluid and are stabilized by tendons and ligaments. When the joints are damaged by injury or disease, arthritis (joint inflammation) can occur.

"He has arthritis" is probably the most common reaction of the pet owner whose Fido or Fluffy is stiff-legged after exercise, has trouble getting up in the morning, or is reluctant to go up or down stairs. But since such stiffness or lameness can have several causes and since arthritis itself comes in

different types, a trip to the veterinarian is a more prudent move than slipping the pooch a couple of aspirin for the discomfort.

Degenerative Joint Disease

Arthritis results from inflammation in the joints and is generally divided into two types - degenerative and inflammatory — according to the source of that irritation. Degenerative joint disease (osteoarthritis) results from destruction of the cartilage that protects the bones that make up the joint. Cartilage destruction can be the result of normal stress on abnormal joints or abnormal stress on normal joints(1). Hip dysplasia(2), a malformation of the hip sockets, is one example of normal stress on abnormal joints. Constant jumping over obstacles, stretching or tearing ligaments during strenuous exercise, or injuries in a fall or accident are examples of abnormal stress on normal joints.

Degenerative joint disease can be further subdivided into primary disease for which no known cause is evident and secondary disease for which a cause can be pinpointed. Among the causes of secondary degenerative joint disease are hip dysplasia, patella luxation (loose kneecaps), osteochondritis dissecans (OCD, the development of cartilage "flaps" in the joints when bone development is disturbed), trauma, and ruptured cruciate (knee) ligaments. Secondary degenerative joint disease can sometimes be prevented or halted by surgical repair of the joint before arthritis progresses.

Degenerative arthritis may not manifest until the dog has had years of abnormal stress. Since cartilage has no nerves, the damage can progress with no outward signs until the joint is severely compromised and the lubricating fluid has thinned and lost its ability to protect the bone surfaces.

Inflammatory Joint Disease

Inflammatory joint disease can be caused by infection or by underlying immune-mediated diseases. Inflammatory arthritis usually affects multiple joints and is accompanied by signs of systemic illness including fever, anorexia, an all-over stiffness. Again, this type of arthritis is subdivided into infectious and immune-mediated categories. Infectious joint disease can be caused by bacteria, by tick-borne diseases such as Rocky Mountain spotted fever, and by fungal infection.

Immune-mediated arthritis is caused by underlying weakness in the immune system and can be hereditary. Rheumatoid arthritis, a deforming type of immune-mediated arthritis, is rare in dogs.

Systemic lupus and an idiopathic (unidentified) immune-related arthritis both can cause nondestructive joint infections. Because infectious joint disease and immune-mediated joint disease call for different treatment protocols, diagnosis must be accurate. The immuno-suppressive drugs used to treat the immune-mediated disease may allow the infectious type of disease to thrive.

Signs of Arthritis

Reluctance to walk, climb stairs, jump, or play

Limping

Lagging behind on walks

Difficulty rising from a resting position

Yelping in pain when touched

A personality change resisting touch

Treatment

Degenerative joint disease can sometimes be halted or prevented by surgery when x-rays indicate joint malformations. If surgery is not indicated or advisable, relief can be achieved with painkillers, exercise, rest, and diet. However, even over-the-counter painkillers should not be used without the advice of a veterinarian.(4)

Researchers are ever busy trying to find new generations of drugs to relieve pain. The latest in pain relievers for canine arthritis includes: Rimadyl, Adequan, and Palaprin, all available only from veterinarians.

Rimadyl (generic name carprofen) has gotten raves from veterinarians for its ability to relieve pain with few side effects. Long-term use of this drug requires periodic blood tests for liver function, but most dogs apparently do well on

it. Like all drugs, however, Rimadyl is not effective for all patients.

Adequan (polysulfated glycosaminoglycan)(5) is given by injection twice each week for four weeks. It not only relieves the pain of arthritis, it binds to damaged cartilage to facilitate repair, blocks the action of destructive enzymes that cause inflammation, and stimulates the production of healthy joint fluid.

Palaprin is a buffered aspirin specifically for dogs; it can be used in the same circumstances in which aspirin is used but without the gastrointestinal irritation that sometimes occurs with aspirin.

There are other drug treatments; dogs with arthritis should be under veterinary care, and the veterinarian can determine which treatment is best for each dog.

Diet also plays an important part in arthritis treatment, especially to control the patient's weight. Excess weight causes more stress on the joints and exacerbates existing arthritis pain. In large breed dogs, periods of rapid growth can lead to development of OCD and joint dysplasias if the underlying genetic code is present, so special attention should be paid to the diets of these puppies to prevent too-rapid weight gain.

Whether drugs, surgery, or both are indicated in arthritis treatment owners should make sure their pets get plenty of rest and are not asked to perform painful exercise during treatment and recuperation. Veterinary advice in the matter of exercise should be followed even though it may seem that

the recovery is slow. Ultimately, the type and duration of exercise will have to be restricted to reduce the pain as much as possible.

Notes

From *Canine Orthopedics* by Robert L. Rooks DVM and Connie Jankowski, the primary source of information for this article.

See hip dysplasia

Signs of Arthritis" from Pfizer Animal Health, manufacturers of Rimadyl.

See "Over-the-counter drugs can poison pets"

Information provided by Luitpold Pharmaceuticals Inc., manufacturers of Adequan.

Information provided by PharmX Animal Health Technology Division, manufacturers of Palaprin.

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