Degenerative Joint Disease

What is Degenerative Joint Disease (DJD)?
Degenerative joint disease (DJD), radiographically referred to as osteoarthritis (OA), is the degeneration of articular cartilage, irregular bone formation around joints, and fibrosis (thickened scar tissue formation) of the joint capsule. Dogs generally develop DJD after a primary joint problem occurs such as hip dysplasia, osteochondritis dissecans (OCD), fragmented medial coronoid process (FMCP), cranial cruciate ligament (CCL) rupture, or traumatic injuries involving a joint. Essentially, arthritic change is one of the body’s methods of stabilizing an unstable joint. Depending on the underlying disease process, surgical stabilization of an unstable joint plus medication may be necessary to reduce or eliminate the cause of lameness and potential source of DJD. Once DJD has been initiated, it is almost always progressive regardless of treatment. However, many treatments can greatly slow its rate of progression increasing a patient’s long-term quality of life. Degenerative joint disease can happen in any breed, but it is common in Labrador Retrievers, Golden Retrievers, and Newfoundlands.

Dogs show evidence of pain from DJD by limping on the limb. Lameness may occur suddenly or gradually over time and may be persistent or intermittent depending on the underlying disease process. In most cases dogs show lameness on one limb. Though, if both hind limbs are simultaneously affected, the pet may not show lameness because he/she does not have a good leg to hop on. This can sometimes delay diagnosis as pets simply aren’t as active as before but not overtly “lame.”

The diagnosis of DJD is based on x-ray changes (osteoarthritis) or by direct visualization within the joint using arthroscopy. Treatment options are recommended based on clinical signs and the underlying condition more than on x-ray findings. Many pets with x-ray evidence of osteoarthritis are not lame and may or may not develop lameness as they age. In many cases, inflammation of the soft tissues around the joint rather than the bones themselves is the source of pain and associated lameness.

Medical management of DJD consists primarily of activity management, anti-inflammatory medications, weight control, and physical therapy. Moderate to regular exercise is important to maintain joint mobility, muscle strength, and joint health. Low impact exercise such as walking trails and swimming tend not to incite lameness and help maintain muscle strength and joint range of motion. Formal physical therapy is also utilized to help keep patients in optimal condition and to maximize joint health. On occasions when over-activity incites inflammation, leash-only activity restriction for 3-5 days or until lameness subsides and anti-inflammatory medications may be necessary to decrease the inflammation and get the patient sound again. Once the inflammatory phase is controlled, a gradual return to normal activity is allowed.

Weight control is a very important factor in the management of DJD. The less weight a pet has to carry with each step, the less stress there is placed on the joints. Additionally, there are studies that have shown that dogs maintained at an optimal weight live longer and have a better quality of life than overweight dogs. Obesity can turn into a vicious cycle where painful pets are reluctant to exercise and tend to gain weight if food intake is not regulated. Yet weight loss can help increase limb function and activity levels and decrease discomfort in animals with chronic DJD.

Medical management in many cases allows pets to live a relatively pain free life. There are times when medical management fails to control pain. In these patients, surgical procedures such as total hip placement (prosthetic joint replacement), femoral head and neck ostectomy (transformation of a joint) and arthrodesis (fusion of a joint) are available and can significantly improve a patient’s limb function and overall quality of life.