

JOINT LUXATIONS (DISLOCATIONS)

Joint Luxations

Joint luxations or dislocations occur most frequently as a result of trauma, but can occur also secondary to poor joint conformation. Common traumatic events that can result in luxations include being hit by vehicles, dog attacks, or getting a leg stuck in or under a fence, kennel door, or in a leg hold trap. Dislocated joints occur when the external force on the joint is strong enough to stretch or tear the soft tissue support holding the bones together in the joint with or without fracturing the bone. The soft tissues that hold a joint in place include; tendons- attach muscle to bone, ligaments- attach bones to bones, & joint capsule- soft tissue that spans across the joint 360 degrees. Ligaments and tendons are strong bands of tissue that run outside the joint capsule to hold the bones in their proper position within the joint. Sometimes with a traumatic luxation, a small avulsion chip fracture can also occur at the site where the soft tissue (ligament or tendon) attaches to the bone (similar to a tree being uprooted that takes along dirt and rocks in its roots). In any case, damage to the soft tissues in conjunction with a possible fracture must occur for a joint dislocation to result.

The most common sites of traumatic joint luxation include the hip, jaw, stifle (knee), carpus (wrist), tarsus (hock or heel), and elbow joints. The second cause of joint luxation is poor joint conformation, a hereditary defect seen in particular breeds. Luxations can occur with minimal trauma or often even normal activity due to the poor joint conformation in conjunction with abnormal growth and development. Patellar joint luxations is the most common joint to luxate seen primarily in small & toy breed dogs such as the Shitz Tzu, Llasa, and mini poodle. Affected dogs develop very shallow grooves where the patella rides, thus making it very easy for the patella to slip out of the groove to the inside of the leg. When this happens, the dog cannot bend the knee normally (sometimes at all) until the patella goes “back into joint” by popping back into the groove. In many of these small breed dogs, the patella constantly slips in and out of joint not bothering the dog much. However, over time, arthritis will develop and the dogs become very sore and lame. Attempts should be made to reduce (replace) joint luxations due to trauma as soon as possible to avoid further damage and stretching/ contraction of the soft tissues structures involved. If an extensive amount of damage has occurred to the soft tissue support, a reduced joint may re-luxate with minimal force- often during the recovery from anesthesia.

Symptoms

- History of trauma
- Limping or non-weight bearing on a leg
- Non-weight bearing hind end (hip luxation)
- Swollen painful area on leg
- Uneven shoulders, pelvis, hips, or leg length
- Crepitus in area (bone grinding on bone)

Diagnosis- lameness exam & radiographs

The veterinarian will perform a thorough examination of the dog, including the bones and joints if the dog will permit. When a dog is mildly lame, the dog should be observed walking to evaluate the location and severity of the lameness (limp). In the majority of cases, the doctor will take radiographs of the suspected area to get a full appreciation for the luxation and to evaluate for a concurrent fracture. Luxations can present very similar to closed fractures. Additionally radiographs are used by the surgeons to determine a surgical approach if they are unable to reduce the luxation externally (ie no incision into skin).

Therapy

- **Closed reduction-** when the luxated bone is reduced back into its normal position by anesthetizing the animal and applying pressure to the leg or jaw in conjunction with manipulation in an attempt to slip the bone back into joint.
- **Open reduction via surgery-** is indicated when closed reduction is not successful or if the bone immediately slips right back out of joint after being reduced. In the latter case, there is significant soft tissue damage which must be repaired in order to hold the joint together. At surgery, the surgeon will open up the joint, clean out any blood clots or soft tissue debris from the joint surface, reduce the joint, and then repair the torn joint capsule and possibly reattach torn ligaments and tendons to further add support to the repair.
- **If surgery is not an option** for the owner, the bone out of place will eventually form a “false joint” as a scar develops around the area and the dog adapts to the dislocation.
- **In small dogs with hereditary joint problems**, surgery is usually required to help correct the defect. For example, in the case of patellar luxation, the groove where the patella rides can be made deeper, and the joint capsule on the inside of the leg can be tightened up (imbricated) with sutures.

Prognosis

Depending on the severity of the soft tissue damage and presence of complicating factors such as concurrent fractures, obesity, and the time elapsed since the bone has been dislocated. The sooner the reduction, the better the chances of staying in place.

With dogs suffering hereditary joint problems, the prognosis with surgery is generally good. Consultation with a certified orthopedic surgeon will yield the most favorable results.

Prevention- Luxations are best prevented by keeping the dog at a proper weight and not allowing the dog to become obese, and by providing a consistent level of exercise to maintain fitness and muscle strength.