



# Common Surgical Procedures for Pets Done at MVUCS

## A Pet Owner's Guide to Common Veterinary Surgeries

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Facing the possibility of surgery for your beloved dog or cat can be a stressful experience. As a pet owner, you want to be informed and confident in the care your companion receives. At MVUCS, serving pet families across the Philadelphia region, we believe in empowering you with clear, understandable information about your pet's health. These are some of the common surgical procedures we perform and why they are needed and how they help your pet get back on their paws.

#### Advanced Surgical Procedures We Offer

When possible, we opt for minimally invasive techniques that use smaller incisions and advanced equipment. This approach is gentler on your pet, leading to significantly less pain and a much faster recovery time. From injuries to genetic conditions, our team is experienced in a wide range of procedures.

- **Arthroscopic Surgery:** At MVUCS, we prefer arthroscopy (over arthrotomy) for many of our patients. It allows for minimally invasive approaches to the joint with smaller incisions and specialized equipment, resulting in reduced pain and faster recovery times.
- **Joint Injections:** Joint discomfort, caused by osteoarthritis, is a common condition in older canine (and feline) patients. When surgical correction of the underlying condition has already been pursued or is not an option, joint injections can play an important role in the management of arthritis pain. These injections are delivered in sterile under light sedation via small needles directed into the joint, or intra-articular.
- **Laparoscopic Surgery:** At MVUCS, we prefer laparoscopy (over laparotomy) for some procedures. It allows for minimally invasive approaches to the abdomen with smaller incisions and specialized equipment, resulting in reduced pain and faster recovery times. Prophylactic gastropexy and ovariectomy are our most commonly performed laparoscopic procedures.
- **TPLO:** Many animals with cruciate ligament injury have a sloped top to their tibia (shin bone). This slope

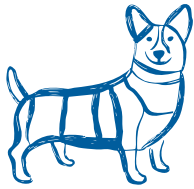
puts excess stress on the cruciate ligament and contributes to it rupturing. The TPLO surgery works by altering the biomechanics of the joint and eliminating the need for a CCL.

- **3D Printed Patient Specific Guides:** Canine and feline orthopedic anatomy is complex and not always as predictable as it is in humans. More recently with the advent of 3D printing, we have been able to harness the power of CT to recreate models of patient's conditions along with patient-specific planning guides for particularly complex or atypical cases. These guides are sterilized and applied intraoperatively in order to direct precise bone cuts, ensure accurate bone reduction, and facilitate ideal orthopedic implant placement.

#### Common Conditions in Dogs and Cats That May Require Surgery

Many common ailments in pets can be successfully managed with surgical intervention. Here are some of the conditions we frequently treat.

- **Achilles Tendon Injuries:** The achilles tendon, also known as the common calcaneal tendon, is a combined tendon from multiple muscles of the pelvic limb. This tendon can be damaged traumatically or chronically/degeneratively. Damaged calcaneal tendons can require medical or surgical treatment depending on the severity.
- **Carpal Hyperextension & Instability:** Carpal hyperextension, seen in dogs and cats, most often occurs when a pet jumps down from a height and lands hard on their front legs, placing high amounts of strain on the carpus (wrist). In cases of carpal hyperextension with severe instability, a carpal arthrodesis is recommended. This procedure involves fusing of the carpus using orthopedic plates and screws.
- **Cranial Cruciate Ligament Tear:** Cranial cruciate ligament injury is the most common cause of rear limb lameness. Injury to the CCL can be complete or partial "rupture." If left untreated, the ruptured ligament and resultant joint instability lead to joint swelling, pain and arthritis.



- **Elbow Dysplasia:** Elbow dysplasia is an inherited developmental disease primarily impacting young growing dogs. The majority of dogs will have changes in both elbows. These changes ultimately result in inflammation, osteoarthritis, and associated pain/ lameness.
  - **Fractured Medial Coronoid Process:** Fractured Medial Coronoid Process (FMCP) is a component of Elbow Dysplasia. A fissure, or crack, develops within the elbow leading to fracture of the medial coronoid process away from the remainder of the ulna, leading to abnormal cartilage wear, inflammation, and pain/ lameness.
  - **Hip Dysplasia:** Hip dysplasia is a deformity of the coxofemoral (hip) joint that occurs during the growth period. It is a hereditary condition where a poorly fitting hip joint with increased laxity will eventually develop osteoarthritis, causing pain.
  - **Hip Luxation:** Hip luxation, or dislocation, refers to displacement of the femoral head (ball) from its socket via disruption of the surrounding stabilizers. Luxation is typically caused by an acute traumatic event. The goal of treatment is to restore function to the joint. If a luxated hip is not addressed, a false joint may form, but it will result in permanent lameness and potentially chronic pain.
  - **OCD Lesions (Osteochondritis Dissecans):** Osteochondritis Dissecans (OCD) can occur in any joint, with the shoulder, elbow, knee and hock (ankle) being the most common. A flap of cartilage forms leading to inflammation and pain/lameness. Dogs may exhibit lameness that gradually increases over months, particularly with exercise. Their joints can become stiff and swollen.
  - **Osteoarthritis:** Osteoarthritis (degenerative joint disease) is the number one cause of chronic pain in the dog and cat. Symptoms include reluctance to rise after rest, an overall decrease in activity level, and changes in gait.
  - **Patellar Luxation:** Patellar luxation is one of the most common congenital anomalies in dogs and can be found in cats as well. It is usually due to a congenital malformation of the end of the femur. Most pets affected by this disease will suddenly carry the limb up for a few steps and shake/extend the leg prior to regaining its full use.
  - **Shoulder Instability:** Medial shoulder instability (MSI) is a common cause of forelimb lameness in dogs, particularly active and athletic breeds. Overuse during repetitive activities (jumping, rapid turns, landing on outstretched forelimbs) damages the soft tissue structures on the medial (inner) aspect of the shoulder. This damage leads to weakening of the structures and, ultimately, excessive laxity and instability.
  - **Shoulder Tendon Injuries:** Supraspinatus and biceps tendon injuries are a common cause of canine forelimb lameness, typically one that improves with activity before worsening afterwards. With repetitive stress or overuse, these tendons can experience inflammation, degeneration, and/or tearing of their fibers. These weakened structures are prone to continued injury and development of “core” lesions. A breed predisposition has been noted in Labrador Retrievers and Rottweilers.
  - **Superficial Digital Flexor Luxation:** Superficial Digital Flexor (SDF) luxation occurs when the SDF tendon slips out of its normal position, disrupting the joint’s normal mechanics, and causing lameness and a “popping” sound. This condition is more commonly seen in active breeds, with Collies and Shetland Sheepdogs being particularly susceptible. Surgery is almost always recommended in these cases.
  - **Tarsal Instability:** Tarsal luxation, seen in dogs and cats, most often occurs when a pet experiences impact trauma such as a vehicular trauma or has their foot caught prior to trying to run, placing high amounts of strain on the tarsus. This heavy strain can cause damage to the collateral ligaments (medial or lateral) or other support structures surrounding the joint. In cases of moderate to severe instability only impacting one collateral ligament, the ligament can often be reconstructed or replaced with a synthetic ligament. In cases of severe instability or fracture, a tarsal arthrodesis is recommended. This procedure involves fusing of the tarsus using orthopedic plates and screws
  - **Ununited Anconeal Process:** Ununited Anconeal Process (UAP) is a component of Elbow Dysplasia. Failure of a growth plate within the elbow to close normally during the maturation process. This failure ultimately leads to instability of the anconeal process, inflammation, and pain/lameness.
- Learning that your pet may need surgery is difficult, but understanding the diagnosis and treatment options is the first step toward recovery. Call MVUCS to find out more information about our surgical procedures or to schedule a consult with one of our specialists. 🐾

