

Medial or Lateral Patella Luxation (MPL/LPL)



Normal Knee



MPL

- Patella Luxation (kneecap dislocation) is a common condition that can result in an abnormal gait, pain, and osteoarthritis.
- In its normal position, the patella serves to improve the function of the quadriceps muscle to extend the knee and stand. Gait abnormalities (often an intermittent skip followed by normal gait) are due to the poor mechanics of having a dislocated patella.
- Persistent pain or lameness may occur as the cartilage in the joint begins to wear (degenerate). This is the initiation of osteoarthritis (OA).
- The most common type of Patella Luxation is a medial luxation (dislocated to the inside of the knee) but lateral luxations also occur less frequently.
- Small and toy breed dogs are most commonly affected but large breed dogs and cats can also be diagnosed with a Luxating Patella.
- Patella Luxations most often occur secondary to the patients' conformation, or shape, of the leg. A number of deformities may develop in growing dogs secondary to chronically luxated patellas. Traumatic luxations occur, but are uncommon without major trauma such as being hit by a car.
- Conformational changes seen with Patella Luxation:
 - S- shaped curve to the femur and tibia
 - distal femoral varus
 - tibial valgus
 - Torsional deformity of the femur and tibia
 - Medialized patella ligament insertion (tibial tuberosity)
 - Shallow femoral sulcus and medial trochlear ridge
 - Abnormally high patella (Patella Alta)



X- ray showing MPL

- Patella luxations are graded based on the severity. A grade 1 luxation is the mildest form and indicates that the patella resides within its normal position most of the time, but periodically dislocates and reduces with normal activity or manipulation. A grade 4 luxation is the most severe form and indicates a patella that is dislocated and cannot be manually reduced into its normal position. The most common grades of luxation are Grades 2 and 3.
- Treatment is based on the symptoms or how severely your pet is affected.
 - Non- surgical treatment
 - No treatment is indicated in adult dogs and cats that show minimal or no symptoms and no evidence of arthritis.
 - Surgery
 - Indicated in pets with frequent or persistent gait abnormality and lameness.
 - Surgery may be indicated in juvenile dogs (prior to skeletal maturity) with minimal lameness to prevent secondary growth deformities.
 - X- rays and in some cases advanced imaging (CT Scan) are required prior to surgery.
 - The goal of surgery is to improve mechanics of the quadriceps muscles, to mitigate the progression of arthritis, and to prevent secondary deformities of the femur and tibia (in young dogs).
 - Techniques that may be required to stabilize the patella:
 - Deepening of the trochlear groove (recession trochleoplasty)
 - Repositioning of the attachment of the patella ligament (tibial tuberosity transposition)
 - Release of scar tissue and tightening of capsule (medial capsular release and lateral imbrication)
 - De- rotation of the tibia (anti- rotational suture)
 - Femoral or tibial deformity correction (femoral or tibial osteotomy)

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