

Medial Patellar Luxation (MPL)

What is a Medially Luxating Patella?

Patella is the scientific name for knee cap and medial is another way of saying towards midline or inward. Luxation is a term used to describe when an anatomic structure moves out of its normal position. As the patella pops out (luxates) and moves back (reduces) into its normal position, the cartilage on the underside of the patella and on the end of the femur (thigh bone) can begin to wear and in chronic cases can wear to the point of full-thickness cartilage loss. This abnormal wear causes inflammation, pain and lameness. Medial patellar luxations are often hereditary (passed from parent to offspring) especially in small and toy breeds.

Diagnosis

A diagnosis of patella luxation is made by performing a thorough physical exam and feeling the knee cap luxate out of its trochlear groove. Luxations are graded I-IV based on severity.

1. Grade I: the patella can be manually luxated, but returns to its normal position on its own. Patients may or may not show lameness. Surgery is only recommended in patients showing lameness.
2. Grade II: the patella is easily luxated and moves in and out of its normal position with flexion and extension of the knee. Intermittent pain and lameness are common. Surgery is recommended in all patients showing lameness.
3. Grade III: the patella is luxated most of the time, but can be reduced manually. Pain and lameness are usually frequent or constant. Surgery is almost always recommended as many of these patients are lame a majority of the time.
4. Grade IV: the patella is locked out of its normal position all of the time and can only be reduced back into a normal position with surgery. Abnormal rear limb gait and tibial deformities are often present. Surgery is usually recommended, although grade IV luxations carry a much poorer prognosis compared to grades I-III even with surgery.

Treatment (grades I-III)

MPL repair is accomplished by utilizing a number of techniques to: a. realign the knee cap with the quadriceps muscle group, b. establish a groove for the knee cap to track in and c. release scar tissue that may be holding the patella out of its normal alignment. One or all of the following surgical techniques are required for optimum long-term results.

1. Tibial crest transposition to realign the patella with the quadriceps muscle group. The newly aligned tibial crest is anchored with steel pins. This procedure is performed in almost every case.
2. Trochlear wedge recession to recreate a groove at the end of the femur giving the patella a stabilizing “valley” to track in.
3. Fascial imbrication to tighten stretched lateral supporting tissues.
4. Releasing incision to free the patella from medially contracted scar tissue allowing it to move back into a normal position.

