香港獸醫專科服務

HONG KONG VETERINARY SPECIALTY SERVICES

Medial Patellar Luxation (MPL) in Dogs & Cats

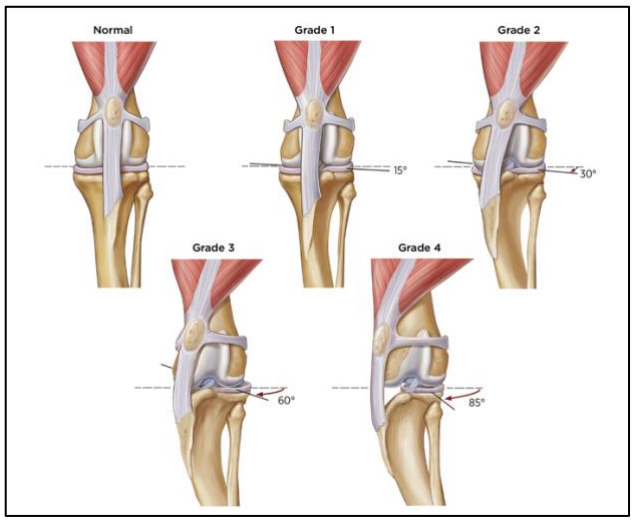
Quick take

Medial patellar luxation means **the kneecap slips out of its groove toward the inside of the leg**. It causes intermittent skipping lameness, knee pain, cartilage wear, and early arthritis.
It is common in **small-breed dogs** (Pomeranians, Yorkshire T, Poodles, French/English Bulldogs, Chihuahuas) and seen in bigger breeds and cats too.

Surgery is recommended when:

- Lameness is persistent
- Pain is present
- There is limb deformity or instability
- The pet cannot exercise normally
- Luxation is Grade 2+ with clinical signs

Mild, incidental MPL with no pain may be managed conservatively.



Position of the tibia relative to the femur and shape of the femoral trochlea in dogs with medial patellar luxation grades 1 through 4. The dashed line represents the distal femur in the frontal plane, while the solid line represents the proximal tibia in the frontal plane. As the grades increase, progressive internal rotation of the tibia at the stifle joint and deformity of the medial trochlear ridge are noted.

1) What's going on inside?

The kneecap normally rides in a bony groove at the end of the thighbone (femur). Some animals have a shallow groove, misaligned muscles/tendons, or twisting of the leg bones, causing the patella to pop out medially (to the inside).

When it luxates:

- The leg may kick outward or skip
- The knee feels unstable
- The cartilage under the kneecap wears down
- Chronic inflammation → arthritis
- In severe cases, the shin bone twists over years due to abnormal forces
- It often worsens over time if untreated.

2) Signs owners notice

- “Skipping” gait or occasional hopping
- Sudden yelp then quick recovery
- Stiffness after rest
- Licking at knees
- Wobbliness, bunny-hopping on stairs
- Bow-legged stance in hind limbs (common in small breeds)
- Cats: subtle lameness, jumping reluctance, sitting oddly

3) How vets diagnose it

- Physical exam to feel kneecap motion: it will help determine a grade 1–4 scale
- X-rays to check alignment and arthritis
- Advanced imaging (CT) in severe limb deformities or large-breed cases

Grade	Description	Typical plan
I	Patella pops out only when pushed	Monitor, conservative care
II	Pops in/out spontaneously	Surgery if symptomatic
III	Out most of the time, can be pushed in	Surgery recommended
IV	Permanently out, cannot stay in	Surgery strongly recommended

4) Treatment

A) Conservative (when appropriate)

Used for **Grade 1** or **very mild, pain-free Grade 2** cases:

- Weight control (critical)
- Joint supplements (omega-3s, glucosamine/chondroitin)
- Controlled low-impact exercise
- Rehab/physiotherapy
- Pain meds for flare-ups
- Avoid slippery floors

Limitations: Does not correct the mechanical problem; arthritis may progress.

B) Surgical correction (gold standard for symptomatic MPL)

Goals:

- **Realign kneecap tracking**
- Deepen or reshape the trochlear groove
- Tighten or release soft tissues as needed
- Correct bone alignment if rotation/bowing is present

Common surgical components

Procedure	Purpose
Trochleoplasty (deepening the groove)	Keeps patella seated securely
Tibial tuberosity transposition (TTT)	Moves patellar tendon insertion to align kneecap
Soft tissue reconstruction	Tighten loose tissue, release overly tight tissue
Anti-rotational sutures or implants	Prevent internal tibial rotation
Corrective osteotomies (bone straightening; more common in large dogs/severe deformity)	Fix bone twisting or bowing

Modern surgeries often combine methods to improve stability and reduce recurrence.

Cats

- Many cats have mild MPL and do not need surgery
- In feline patients, Traumatic injuries can cause a sudden worsening of a mild grade to a severe grade and precipitate severe clinical signs.
- **Surgery for painful or severely unstable cases**
- Techniques similar to dogs, but bone shape is different — requires feline-experienced surgeon

5) Expected outcomes

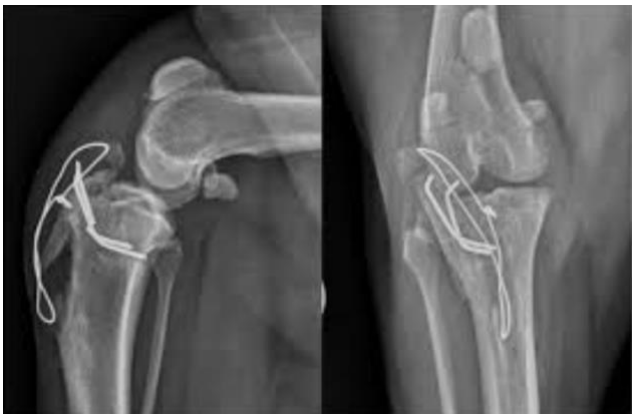
- **~90–95%** of small/medium dogs **enjoy excellent-to-good function after surgery**
- Large-breed dogs have slightly higher complication/reluxation risk but still excellent success with experienced surgeons
- **Cats often do very well post-op if surgery is indicated**

6) Complications & realistic rates

Estimated ranges from multiple modern reports & surgical guidelines:

Complication	Approx. rate	Notes
Seroma / swelling	5–15%	Self-limiting, cold packs/rest help
Infection	2–8%	Higher if incision licked — E-collar important
Implant failure (pins/migration)	5–10%	May require revision surgery
Reluxation / recurrence	5–15% overall	Higher in Grade 4, large breeds, deformity cases
Tibial tuberosity fracture	1–5%	Usually from early over-activity
Arthritis progression	Common long-term	Slowed by surgery & weight control

Most complications are manageable; revision surgeries, when needed, generally succeed.



7) Recovery timeline

Time	What to expect
Day 0–3	Pain meds, icing, rest, short potty outings
Week 1–2	Controlled leash walks only; no stairs/jumping
Week 3–6	Gradually increasing leash walks; physiotherapy starts
Week 6–8	X-rays if bone work done; controlled strengthening
8–12 weeks	Return to normal walks; avoid high-impact until cleared
4–6 months	Full activity for most dogs

Rehabilitation/physiotherapy meaningfully improves outcomes.

8) Long-term management & prevention

- Maintain lean weight (most important!)
- Strengthening exercises (glutes/quads/core)
- Omega-3 fatty acids & joint supplements
- Traction flooring, avoid slippery surfaces
- Slow, controlled exercise progression
- Dogs with MPL are prone to cruciate ligament tears — keep knees strong and weight ideal.

9) Questions to ask your surgeon

- Which surgical method(s) will you use and why?
- What are your recurrence/complication rates?
- Will my pet need bone realignment (osteotomy)?
- Pain control and rehab plan?
- How long on strict rest?
- When will follow-up X-rays be done?

10) Key client-friendly veterinary references

- ACVS (American College of Veterinary Surgeons) — MPL
- VCA Hospitals — Patellar Luxation in Dogs
- University veterinary hospitals (e.g., Cornell, UC Davis, PennVet) orthopedic client guides
- American Animal Hospital Association (AAHA) orthopedic care pages
- Canine Arthritis Management (CAM) resources for joint protection

All offer clear, reliable explanations.

Bottom line
MPL is very common, especially in small dogs.
Mild cases may be monitored; symptomatic cases do best with surgery.
Modern techniques achieve 90%+ good-excellent function.

Success relies on:

- Early appropriate surgical planning
- Pain management & strict rest early
- Rehab and long-term weight management
- Most pets return to happy, active lives — jumping, running, and playing safely again.