



University Hospital Galway

EMERGENCY DEPARTMENT
GalwayEM.ie

Knee and Leg - Bony Injuries

(<https://galwayem.ie/guidelines/trauma-and-musculoskeletal/knee-and-leg-bony-injuries>)

Category

Trauma and Musculoskeletal (<https://galwayem.ie/guidelines/trauma-and-musculoskeletal>)

Dislocation of knee

- Reduce
- Test circulation/nerves of foot
- CT angiogram
- Call vascular surgeons if no pulse or compromised circulation
- Splint at 15 degrees
- Refer orthopaedics

Dislocation of patella (N.B. Most reduce spontaneously before the patient gets to hospital - the diagnosis is usually made on the history)

- Manipulate if still dislocated
- X-ray to exclude a fracture
- Knee splint or Robert Jones bandage.
- Crutches, Advise on quads exercises
- Fracture Clinic

Fractured patella (Beware the bipartite patella).

If caused by major blow to knee (e.g. dashboard)

- x-ray hip as well.

If undisplaced and extensor mechanism intact:

- Extension knee brace, crutches
- Fracture clinic

If extensor mechanism **not** intact or if displaced, refer orthopaedics.

Significant avulsion fracture tibial spine Refer orthopaedics Osteochondral fractures Refer orthopaedics.

Fracture of tibial plateau

Ask advice

Undisplaced

Extension knee brace

Fracture clinic

Displaced

Refer orthopaedics

Isolated fracture upper or midshaft fibula

- Examine common peroneal nerve
- Treat symptomatically e.g. tubigrip or POP as appropriate
- Fracture Clinic

Fracture shaft tibia and fibula

Check for compartment syndrome

Undisplaced Long leg POP Re-X-ray to check position

Adults - refer orthopaedics ? admission

Children - non weight bearing on crutches

Fracture clinic

Displaced

Immobilise in a back slab

Analgesia

Refer orthopaedics

Epiphyseal fracture lower tibia Ask advice.

Toddlers fracture (spiral fracture of the tibia)

A toddler who trips and who will not weight bear must have the whole lower limb x-rayed unless clinical examination can localise an injured area. It is often difficult to localise the area of injury in an upset child. If the child can still crawl but will not walk the injury is below the knee.

Spiral fractures of the tibia may not be visible on initial x-rays and so if the child will not weight bear and x-rays are normal, treat as a possible fracture. The treatment options are support bandage or below knee back slab. Discuss with the parents. Refer to VFC or Review Clinic in 3 weeks.

N.B. All patients with legs in plaster of Paris need advice on quads exercises.

NB if in a below or above knee POP consider DVT prophylaxis

If a patient has a major leg injury e.g. from an RTA, X-ray the whole leg.

Compartment syndrome

- Classically occurs with tibial fractures
- May occur in absence of fracture
- May also occur in the forearm
- Pain out of proportion to physical findings
- Pain not responding to analgesia
- Pain on minimal stretching of the muscle group
- Parasthesia and loss of distal pulse is a late sign
- If suspect ask senior advice or refer to orthopaedics.

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