



# Acute Knee Injuries

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**Sport and Exercise Physician**





AUSTRALASIAN COLLEGE OF  
SPORT AND EXERCISE PHYSICIANS

**ACC CONSULTATIONS **ARE FREE** WITH A REFERRAL  
NOT JUST THE ELITE ATHLETE**

# Acute Knee Clinic

Do you have an acute knee injury?

Our Sport and Exercise Medicine Physicians hold an acute knee clinic every Tuesday morning at our St Johns address, and every Wednesday afternoon at our Glenfield address.

If your knee injury meets the following inclusion criteria, you are eligible to book an appointment at our clinic - just fill out the form below and we will contact you on the next working day to arrange your booking.

1. Injury occurred within the last 4 weeks

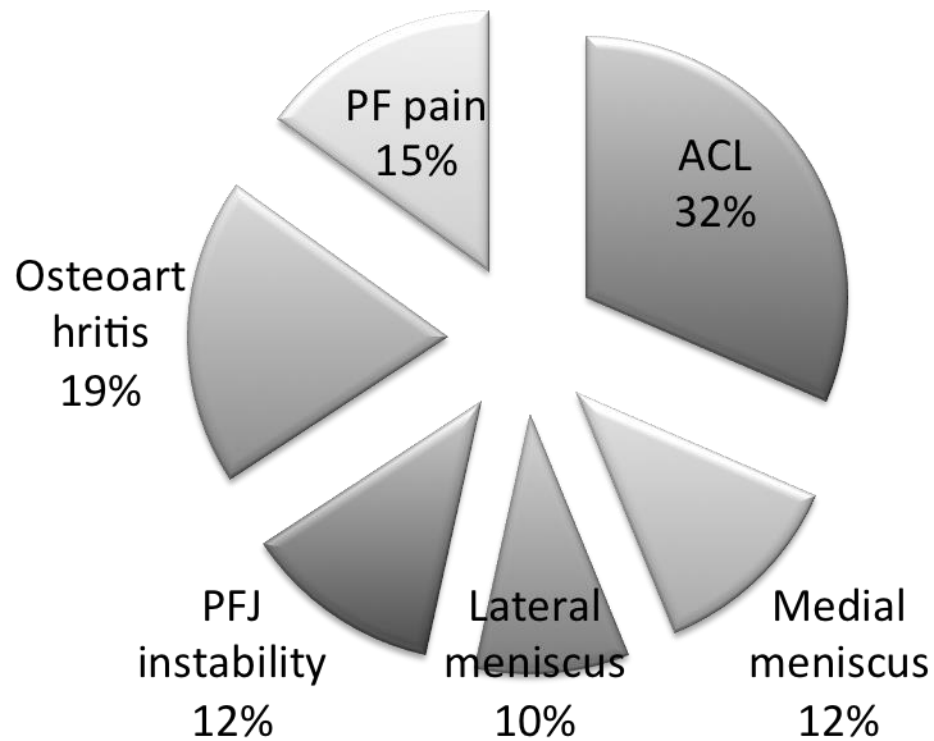
What to expect:

- Early definitive diagnosis
- An accurate management plan
- Early imaging (MRI) and early surgical opinion where needed
- No waiting list
- Free treatment (with ACC claim)

Get top-quality treatment with minimum delay at the Axis Acute Knee Clinic.

To Request an appointment, please fill out the form below and we will be in touch.

# Diagnoses



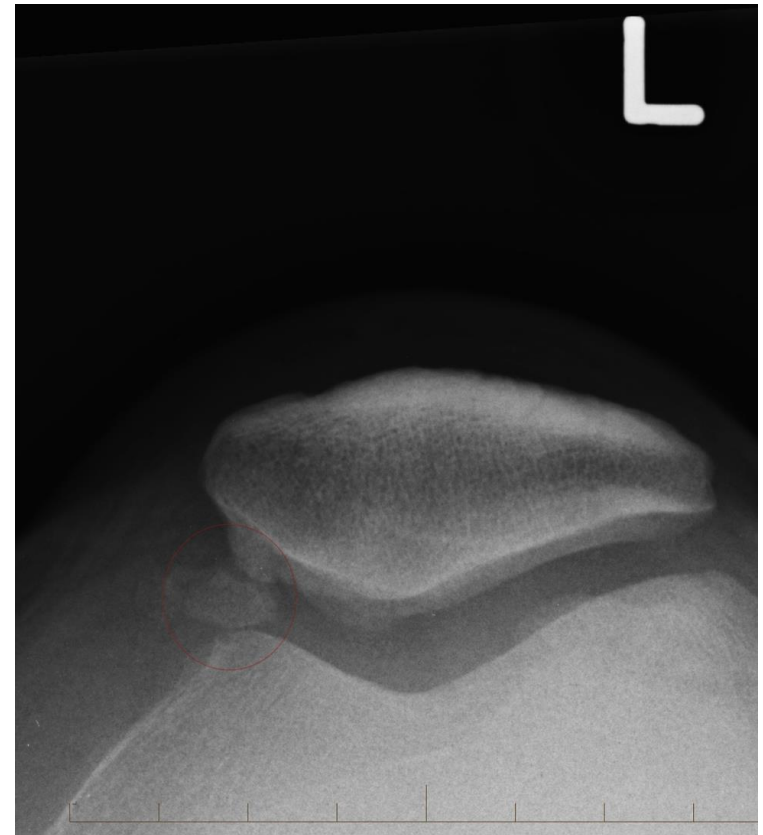
# History

- Was there actually trauma...or more insidious onset?
- Was there swelling (a true effusion)
  - Immediate/within hours
  - More the next day
- Where is the pain
  - Vague and hard to localise?
  - Well localised to the medial or lateral knee
- What is the patients age and is there a history of past trauma or surgery?



# Knee X-ray

- Know what to ask for and when...
  - Skyline view
    - This profiles the patello-femoral joint
  - Notch or Rosenbourg view



# Knee ultrasound



- Pretty well **worthless**
- Extensor mechanism
  - Patella tendinopathy/tear
  - Quadriceps tendon pathology

# Need for MRI?

- Interpret with care
- Main uses
  - When the diagnosis is not clear
  - Pre-operative planning
  - If people are not getting better
  - When work is affected



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# Haemarthrosis

## **EARLY SWELLING IMPLIES A HAEMARTHROSIS**

- Anterior cruciate ligament injury
- Patellar dislocation
- Fracture/Osteochondral fracture

# Anterior cruciate ligament injury

## History

- Two mechanisms
  - Non-contact (majority)
  - Contact – Often valgus stress/hyperextension
- Pop
- Feeling of something moving
- Massive early swelling

## Examination

- Lachmans test
- Anterior draw
- Pivot shift test
- Lateral tenderness
- Effusion

# Anterior cruciate ligament injury

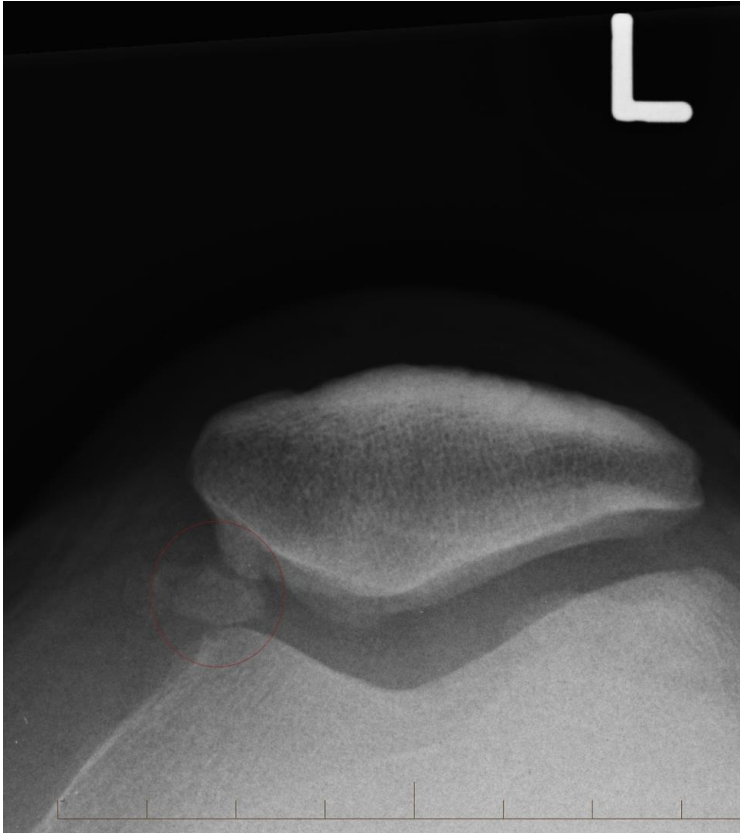
- Everyone
  - Needs an XR
  - Initial rehabilitation – quads strength and ROM
  - 6 weeks



# Anterior cruciate ligament injury

- Beware of associated injuries
- Surgery vs conservative
  - No influence on development of OA
  - Depends on patient's demands and expectation
    - Direction change sport/physical job
    - Triathlon
    - Skeletal immaturity

# Patella instability



- Two groups
  - Traumatic
  - Atraumatic – gen laxity
- Usually self-reduce with extension of knee
- Tender medial border patella
- Patella apprehension



# Knee aspiration

- Lateral approach
- Tilt patella with other hand
- Big needle (18 gauge)
- Big syringe (50ml)
- Risk infection < 1/15,000



# Knee Injuries

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# Meniscal injury

- Twisting injury with the foot planted on the ground
- May be no immediate swelling
- May be symptoms of:
  - Localised pain
  - Locking or catching
  - Swelling
  - Instability – ‘give way’

# Examination - meniscus

- I look for five things
  - Pain and/or restriction with flexion
  - Pain and/or restriction with extension
  - An Effusion
  - Joint line tenderness
  - Pain with tibial rotation



Tibial Rotation Test

# Treatment - meniscus

- Small tears managed conservatively
- Suggest:
  - Trial NSAIDs
  - ROM Exercises
  - Exercycle program when 90 deg flexion



# Treatment - meniscus

- An orthopaedic opinion when:
  - Locked knee (bucket handle meniscus) needs surgery
  - Mechanical symptoms – true locking
  - True instability

**ARTHROSCOPIC DEBRIDEMENT HAS A PRICE**

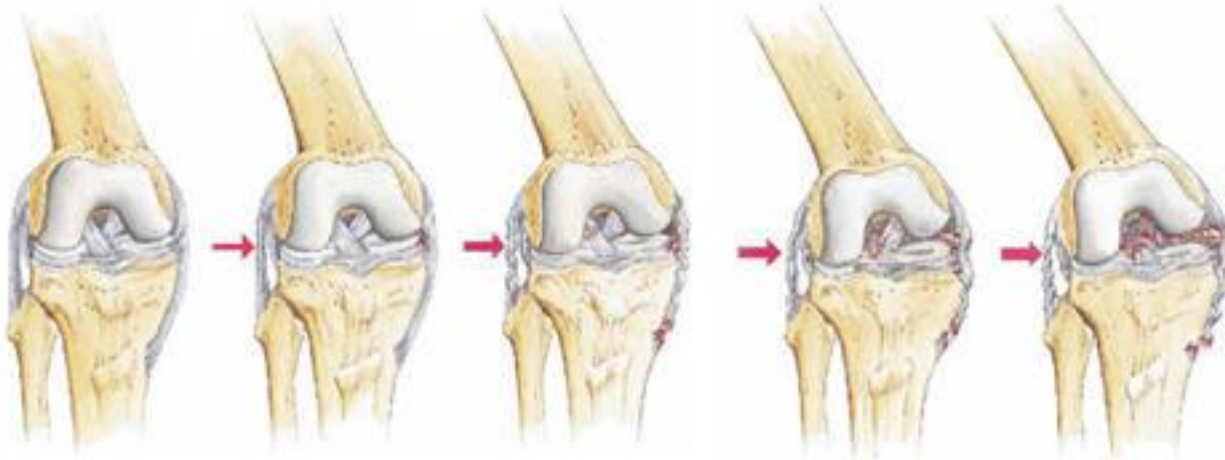
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# Medial ligament injury

- Common injury
- Usually a history of a valgus stress to knee
- Pain generally well located medial knee



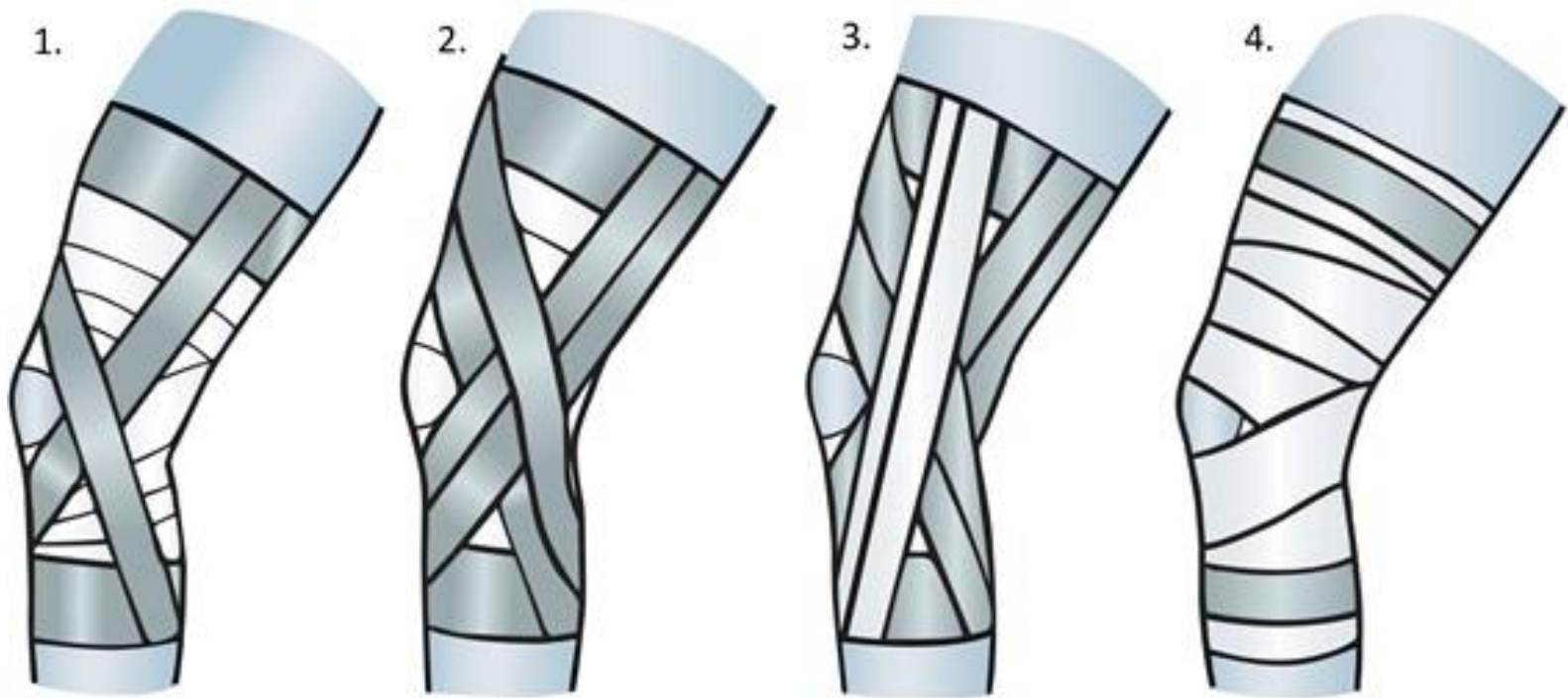
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# Medial ligament Injury

- Tender medial femoral condyle (proximal attachment)
- Valgus stress @  $30^\circ$  - pain +/- laxity

**MOST PATIENTS DO NOT HAVE AN EFFUSION**

# Medial ligament Injury



# Knee injuries

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# Osteoarthritis

- May present like those with meniscal injuries
- PF pain in those with PF involvement
- Consider especially when:
  - Older patients
  - History of past trauma
  - History of past surgery – meniscectomy or ACL reconstruction

# Osteoarthritis

- Education
- Symptom control
  - NSAID?
- Glucosamine?
- Steroid injections



# Osteoarthritis

- Arthroscopic surgery has poor outcomes
  - Locking or instability
  - Knee replacement





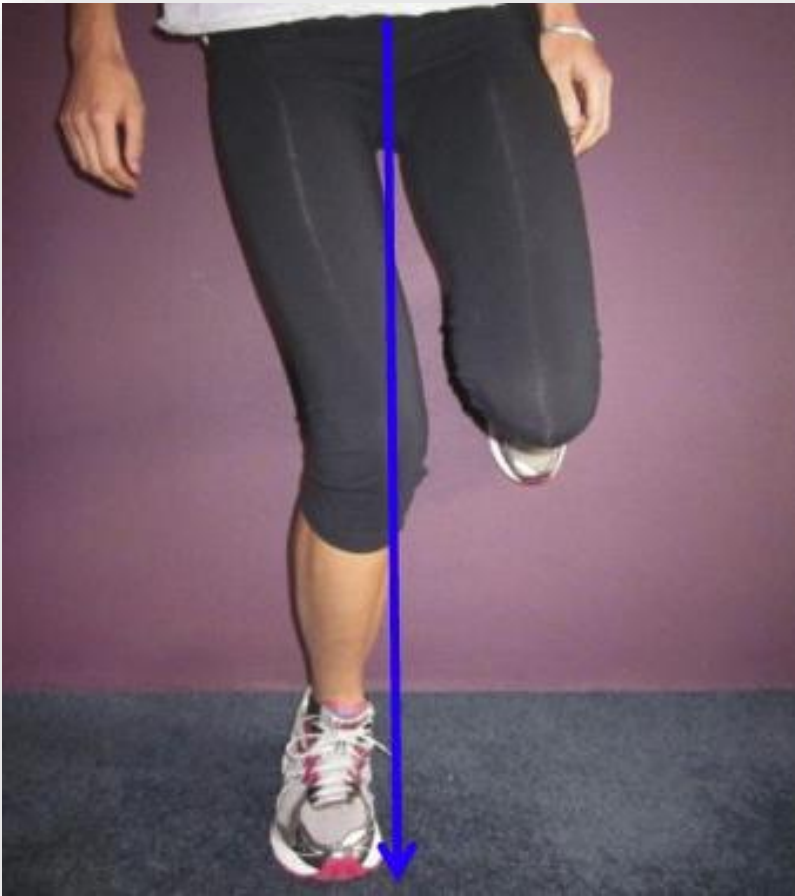
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# Patellofemoral pain

- Poorly located ache during and after sport
- Insidious or vague history or tenuous relation to injury
  - Fall onto flexed knee
- Worse walking up and down stairs
- Exacerbated by prolonged sitting – moviegoers sign
- Sensation of something 'clicking' or 'giving way'

# Patellofemoral pain



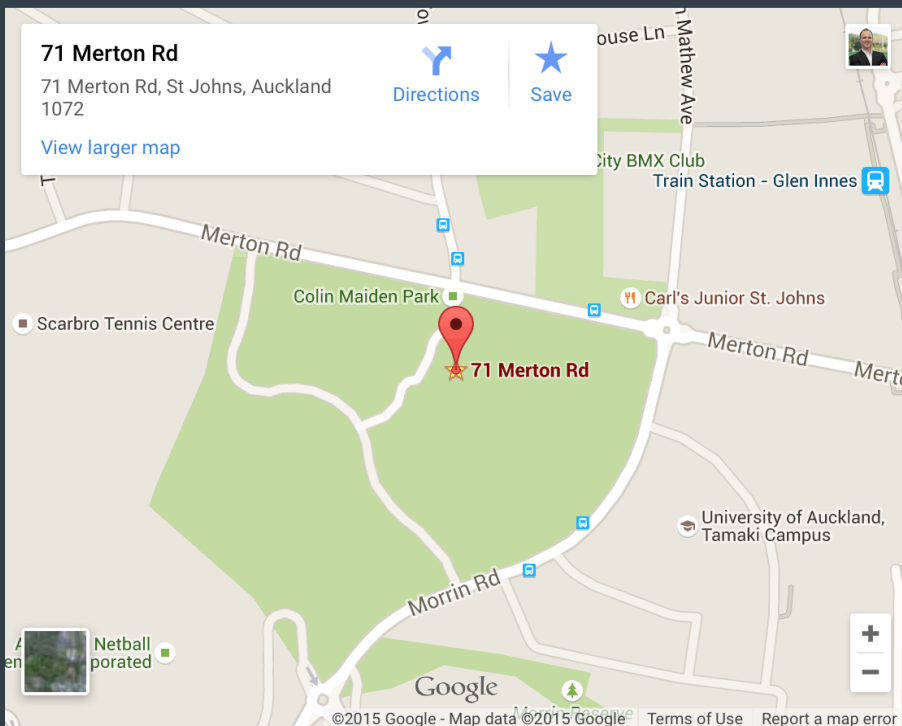
- Most common cause of knee pain
- Majority have no structural abnormality
  - “Bad wheel alignment”
- Often bilateral
- Young patients
- Women

# Patellofemoral pain

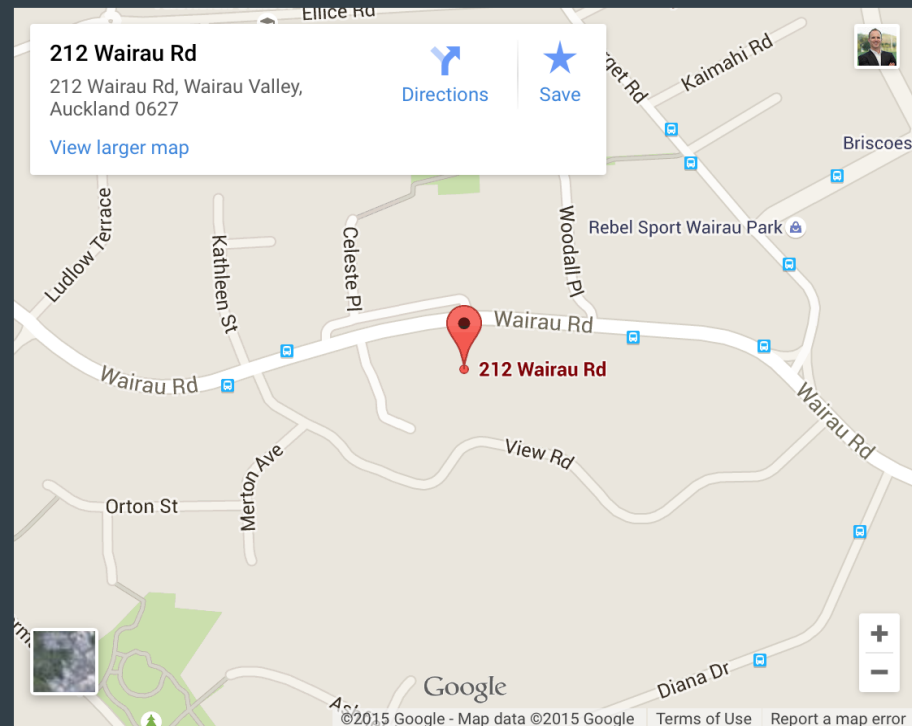


## Patella compression test

- Compare with other knee
- Trying to replicate the 'patients pain'



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# Thank you

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