



# Patello-femoral Pain

Martin Meyer  
Sports Physiotherapist

# Subjective History

## ► Body chart

- Location of pain
- Severity
- Other areas- joints above and below
- Neural symptoms
- Swelling

## ► Mechanism of injury

- Acute- dislocation
- Chronic- insidious onset
- Activity related- training changes, shoes etc



## ► Aggravating Factors- weightbearing Vs non-weightbearing

- Stairs
- Squats
- Lunges etc
- Prolonged sitting- movie goes knee

## ► Special qnts

- Clicking/locking/grinding
- Apprehension
- Instability
- Use of orthotics
- Other joints involved



# Clinical Reasoning

- ▶ What is the main cause?
  - Acute trauma
  - Training factors
  - Shoes
- ▶ What is main source of problem?
- ▶ Are the feet a factor?
  - Weightbearing Vs Non-weightbearing agg's
  - Foot and ankle problems

- ▶ Is pelvic control a factor?
  - Lumbar pain/pelvic pain
  - Agg factors
  
- ▶ Is it more a muscle control issue or purely a tightness issue?
  - Agg factors- static Vs dynamic
  
- ▶ Is further referral/investigation required?
  - Pain severity
  - pm/am pain
  - Recurrent dislocations

# Objective Examination

## ► Observation

- Hip, knee, foot position
  - Bony factors ie genu valgum
- Walking- kinetic chain, pelvic control
- Muscle bulks

## ► Quick test

- Agg activity
- Critical test- add medial patella glide

## ► Q-Angle??





## ► Muscle Length

- Thomas test- rec fem, ITB, psoas
- Hamstrings
- Calf

## ► Patella Mobility

- Medial glide
- Longitudinal glide

## ► Palpation

- Medial and lateral pat facets
- Medial and lateral femoral condyles
- Plicas
- Muscle tightness- ITB/VL

## ► Patella orientation

- Glide
- Tilt
- Rotation
- Alta/Baja

# Muscle Function

## ▶ VMO

- Timing- functional/non-weightbearing
- Bulk

## ▶ Glut med

- Functional
- Single limb standing -trendelenburg sign
- Non-weightbearing- side lying

## ▶ Core

- Functional
- Single limb standing



# Special tests

- ▶ Apprehension sign
- ▶ Critical test
  - functional
- ▶ Plica palpation
- ▶ Clarkes Sign
  - Compression with active contraction.. pain++

# Treatment

- ▶ Release and move tight structures
- ▶ Improve muscular insufficiencies
- ▶ Taping- glide, tilt, rotation
- ▶ Change biomechanical factors- orthotics

# Release and move tight structures

## ► Muscle releases

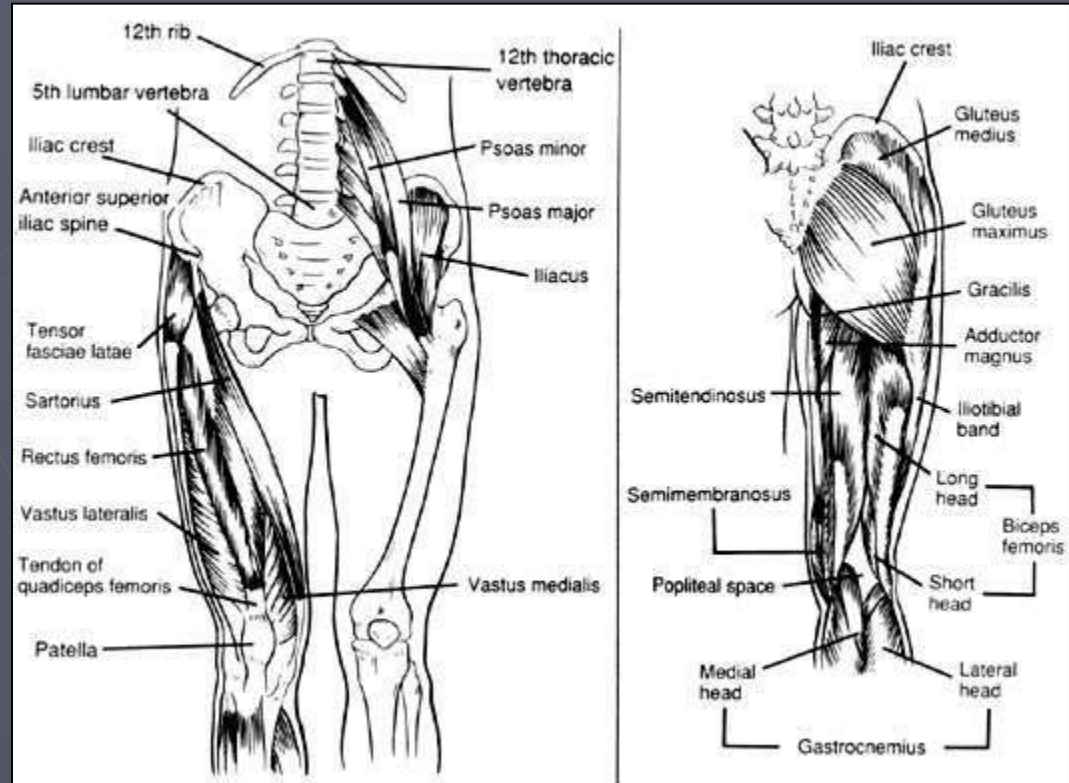
- ITB/VL
- Rec Fem
- TFL

## ► Dry Needling

## ► Stretching

## ► Patellar mobes-

- medial, tilt, long-caud



# Improve muscular insufficiencies

- ▶ VMO
  - Sitting
  - Weightbearing
  - Functional
  - muscle stim and bio-feedback
- ▶ Glut med
  - Side lying
  - Functional
- ▶ Core strength
  - Isolated
  - Functional



# Combine all into function





A group of skiers is gathered on a snowy mountain slope. In the foreground, several skiers are visible, some standing and others sitting. They are wearing winter gear, including jackets, helmets, and goggles. The background features a large, rugged mountain peak with patches of snow and a clear blue sky. The overall scene is bright and sunny.

# Thank you

Lake Louise, Alberta