North West Pick Up 6

18th September 2021
Mercure Hotel Haydock

Neurological examination of upper and lower limb

Mr Royden Austin

Tips on Examination of the Spine

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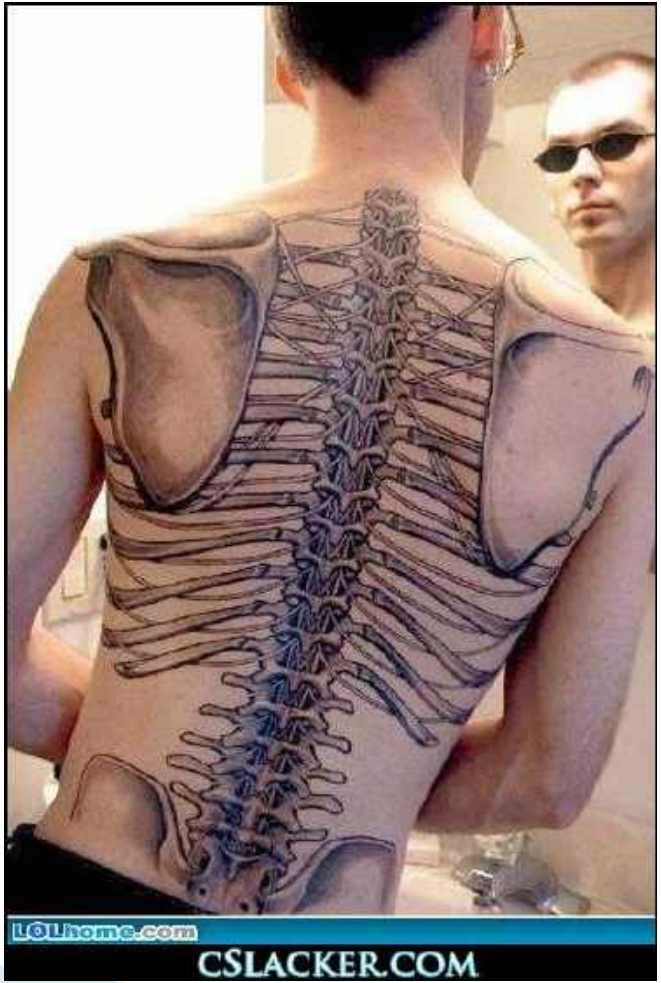
Sweet Jesus!
What is it?!
MR.FISH

General Examination

- Look
- Feel
- Move
- Special tests

Look

- Undress to underwear
- Any swellings, scars or skin discolouration (NF-1)
- Assess erect spinal profile and symmetry
  - Scoliosis — Postural / structural
  - Kyphosis — AS, Scheuermann's, TB
  - Loss of lordosis — Degenerative disease
  - Hyperlordosis — Spondylolisthesis Gait
    Antalgic / broad-based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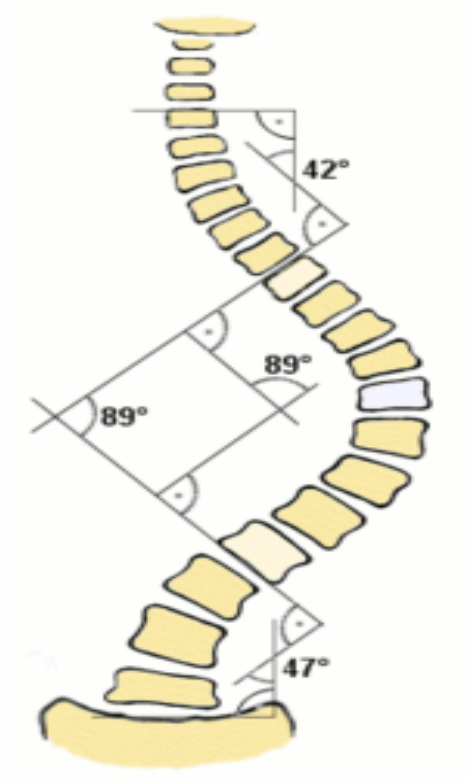
Scoliosis

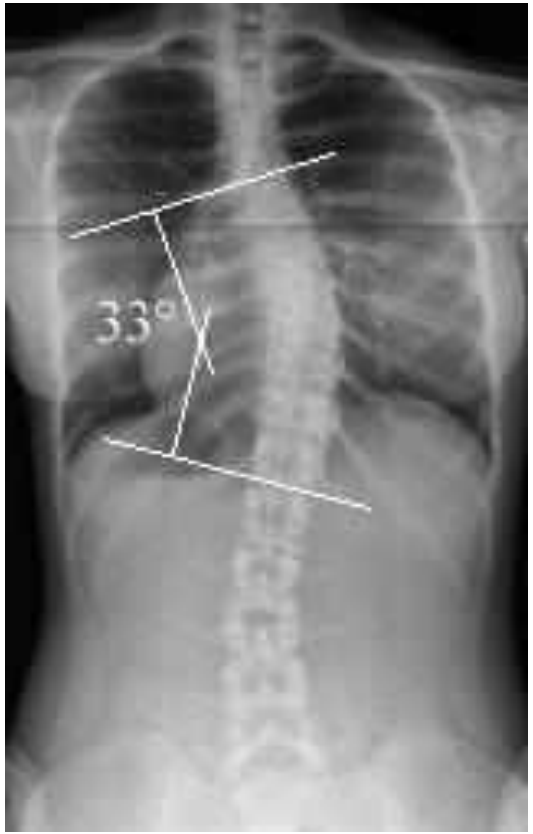
- Congenital
- Idiopathic
- Neuromuscular
- Age of onset
- Growth spurt
- Menarche

Scoliosis


Indication of Scoliosis
Uneven Shoulders
Curve in Spine
Uneven Pelvis

Angle





Kyphosis

- Osteochondrosis
  - *Sever's Calcaneum*
  - *Kienbock's Lunate*
  - *Panner's Capitellum*
  - *Kohler's Navicular*
  - *Freiberg's 2nd Metatarsal*
  - *Osgood-Schlatter's Tibial Tuberosity*
  - *Perthes Femoral Head*
  - Scheuermann's (wedging of Vertebrae and Schmorl's nodes)

Gibbus

Spondylolisthesis

- Wiltse
- DID TPP

- Meyerding
- Grade 1-5

Ankylosing Spondylitis

- Seronegative spondyloarthropathy
- Bamboo spine
- Enthesiopathy
- 3:1 M:F
- HLA B27+ve
- Onset 20-40 years old
- Iritis/uveitis

Feel

- Spinous processes C7-vertebrae prominens
- Last Rib
- Sacro-iliac joints Dimples of Venus
- Paravertebral muscles
- Abdomen Masses, distended bladder, PR (sensation, tone), Prostate.

Move Cervical Spine

- Flexion Chin on chest
- Extension Look to ceiling
- Lateral flexion Ear on shoulder
- Rotation Look left/right
- Any arm pain when performed

Move Thoracic Spine

- Minimal flexion/extension (facets and ribs)
- Rotation little significance
- If Scoliosis is present – fixed or flexible?
- Adams forward bend test

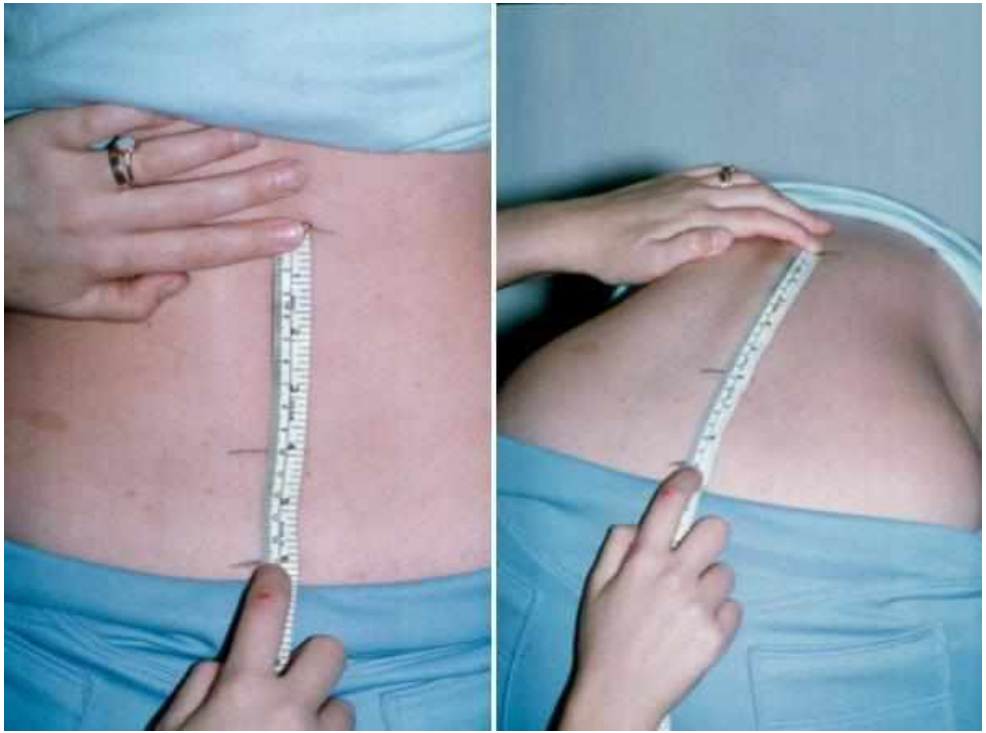
FIGURE 1. Adams forward-bending test

Move Lumbar Spine

- Flexion Pain protection, AS.
  (Schober's Test)
  Extension Facet arthritis
- Lateral Flexion
- Minimal rotation (facets)

} Screen shoulders and hips – (Hawkins test Internal rotation of hip)

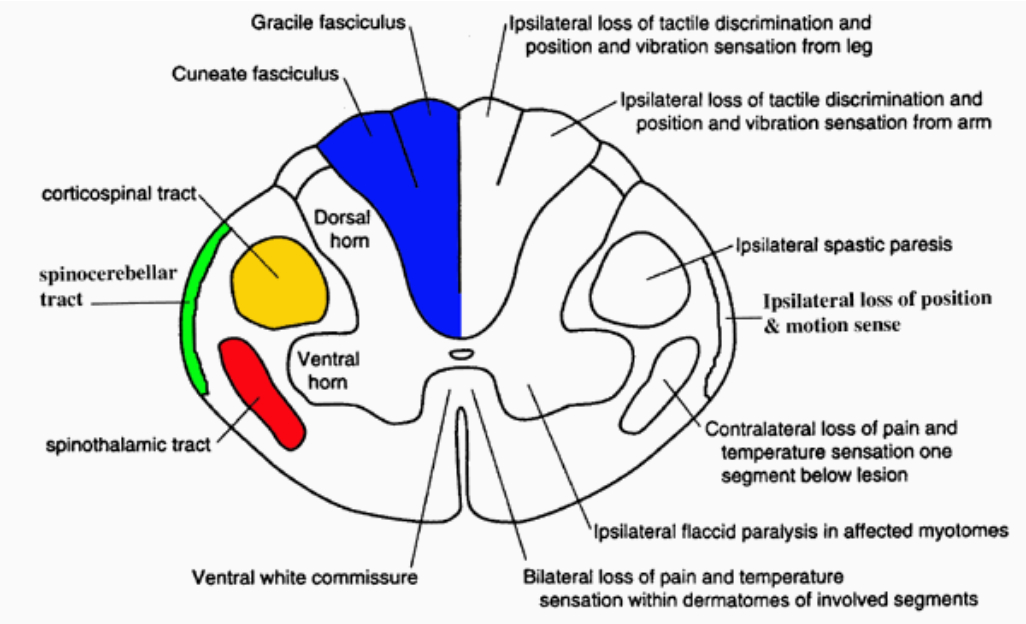
Schober's Test



Any Questions?

Neurological examination of the upper limbs

- Look Wasting/swelling/scars/fasciculations
- Tone
- Sensation Spinothalamic
- Power Corticospinal
- Reflexes
- Proprioception Dorsal Columns
- Coordination Spinocerebellar


Gracile fasciculus
Ipsilateral loss of tactile discrimination and position and vibration sensation from leg
Cuneate fasciculus
Ipsilateral loss of tactile discrimination and position and vibration sensation from arm
corticospinal tract
Dorsal horn
Ipsilateral spastic paresis
spinocerebellar tract
Ipsilateral loss of position & motion sense
Ventral horn
spinothalamic tract
Contralateral loss of pain and temperature sensation one segment below lesion
Ipsilateral flaccid paralysis in affected myotomes
Ventral white commissure
Bilateral loss of pain and temperature sensation within dermatomes of involved segments

Tone

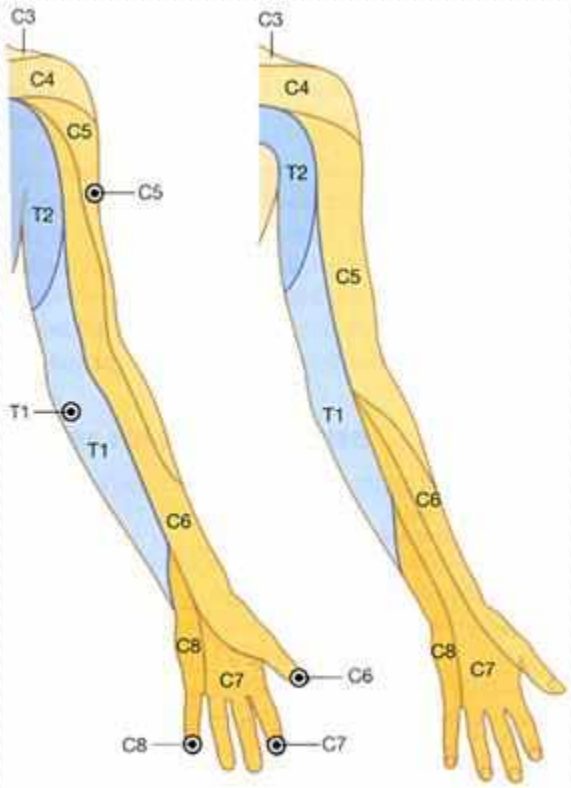
- Normal
- Reduced LMN
- Increased UMN

- LMN ↓ Tone ↓Power ↓Reflexes Fasiculations

- UMN ↑Tone ↓Power ↑ Reflexes Clonus>3beats

Sensation Dermatomes

- C5 Deltoid
- C6 Thumb
- C7 Middle Finger
- C8 Little Finger
- T1 Medial Forearm



Power Myotomes

Shoulder Abduction	Deltoid	C5
Elbow Flexion	Brachialis	C5,C6
Elbow Extension	Triceps	C7,C8
Wrist Extension	ECU	C6,C7
Finger Flexion	FDS/FDP	C8
Finger Extension	EDC	C7, C8
Finger Abduction	DI	C8,T1
Finger Adduction	PI	C8, T1

Power MRC Grading

- 0 No Contraction
- 1 Flicker of movement
- 2 Movement with Gravity eliminated
- 3 Movement against Gravity
- 4 Movement against Gravity and Resistance
- 5 Full Power

Reflexes

- Present /increased/reduced (reinforcement)
- Biceps C5
- Triceps C7
- Brachioradialis C6
- Hoffman's sign – Flexion thumb and index finger after flick to pulp of index finger

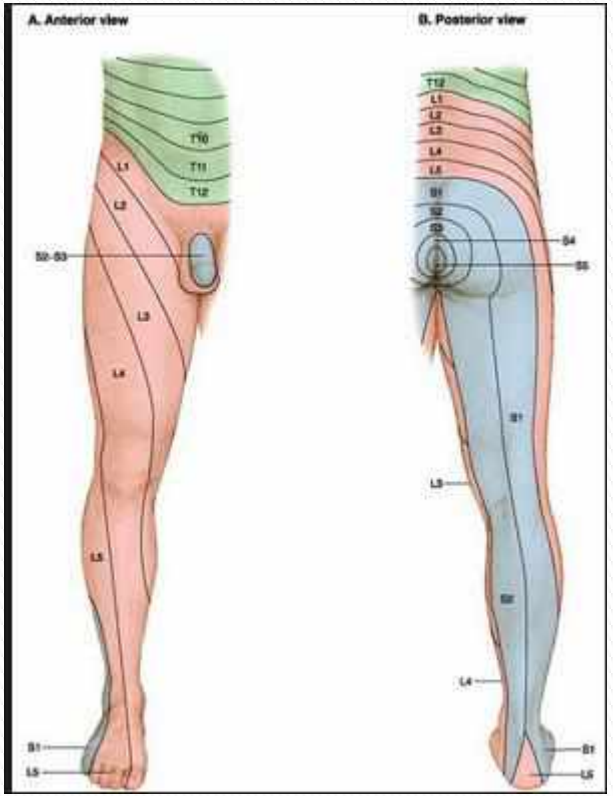
- Screen shoulders
- Phalen's / Tinel's test

Neurological examination of the lower limbs

- Look Wasting/swelling/scars/fasciculations
- Tone
- Sensation
- Power
- Reflexes
- Proprioception
- Coordination

Sensation Dermatomes

- L1 Groin
- L2 Mid thigh
- L3 Knee
- L4 Medial calf
- L5 Lateral calf
- S1 Lateral foot
- S2 Posterior thigh
- S3 Buttock
- S4&5 Perianal



Power Myotomes

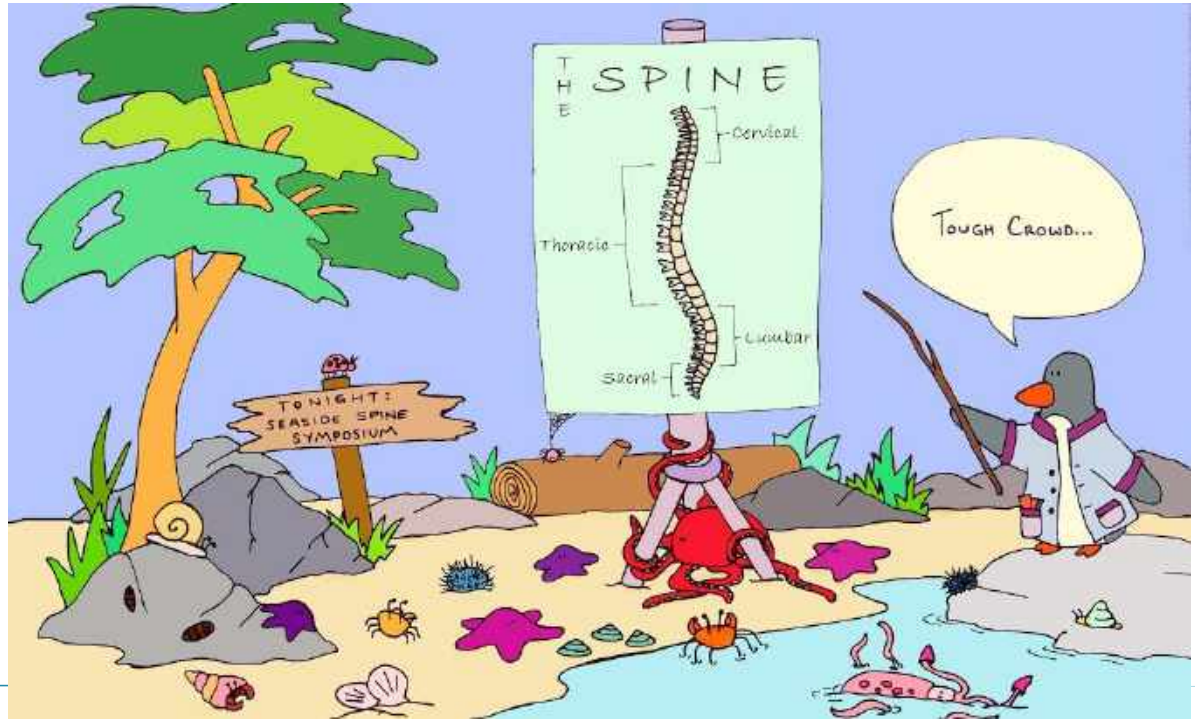
Hip Flexion	Iliopsoas	L1&2
Hip Extension	G Max	L5 S1
Hip ADduction	Adductors	L2&3
Hip ABduction	G Med Min	L4&5
Knee Flexion	Hamstrings	S1
Knee Extension	Quads	L3&4
Ankle Dorsiflex	Tib Ant	L4
Ankle Plantarflex	Gastroc	S1&2
Toe Flexion	FDL/FHL	S1&2
Toe Extension	EDL/EHL	L5

Reflexes

- Patellar L3/4
- Achilles S1/2
- Plantar direction

Special Tests

- Sciatic stretch test
  - Straight leg raise/Lasegue's sign/Bow-string test
- Crossover sign
- Femoral stretch test
- Palpate Greater Trochanters/Ober's test
- Internal/external rotation of hips in extension and flexion
- FABER test


THE SPINE
Cervical
Thoracic
Lumbar
Sacral
TONIGHT: SEASIDE SPINE SYMPOSIUM
TOUGH CROWD...

Thank you

Freedom to walk - foot and ankle

Mr Dominic Sprott

FREEDOM TO WALK

LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

Common Foot & Ankle conditions

By

Mr. D Sprott

Consultant Orthopaedic Surgeon

Specialist Limb Reconstruction and Foot & Ankle surgeon

ANKLE

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Ankle Arthritis
- Achilles tendonopathy
- Other Tendonopathy
- Ganglion

ANKLE ARTHRITIS

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Ankle Arthritis
  - Presentation
    - Young (<50)
      - Secondary to trauma
      - Inflammatory arthropathy
    - Prime of life (>50)
      - OA

ANKLE ARTHRITIS

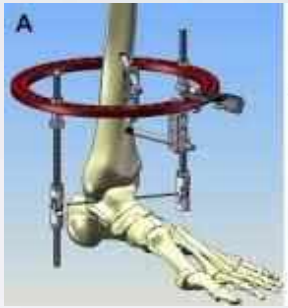
FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

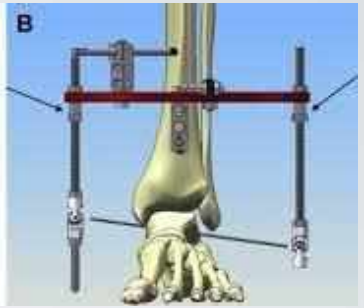
- Presentation
  - Pain
  - Swelling
  - Reduced ROM
- Investigations
  - X-rays
- Management
  - Conservative
    - Analgesia
    - Physiotherapy
    - Orthotics: Splints, Rocker bottom shoes

ANKLE ARTHRITIS

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Management: (Refer to Ortho.)
  - Invasive
    - Injections (X-ray, U/S guided)
      - Steroid
      - Platelet Rich Plasma (PRP)
    - Surgery;
      - Arthroscopy
      - Chilectomy
      - Arthodiastasis
      - Ankle Fusion
      - Ankle Replacement





ACHILLES TENDONOPATHY

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Consists of 3 conditions
  - Achilles tendonitis
  - Retrocalcaneal Bursitis
  - Haglunds deformity

ACHILLES TENDONOPATHY

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- **Insertional Achilles Tendonitis**
  - Pain & thickening at insertion of Achilles' tendon
  - Occurs mostly in middle aged and pt's with tight heel cord
  - Mechanism;
    - Repetitive trauma leads to inflammation followed by cartilaginous then bony metaplasia

ACHILLES TENDONOPATHY

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- **Achilles tendonopathy (Non-Insertional)**
- Thickening and swelling of midsubstance of TA
- Mechanism;
  - Overuse injury
  - Imbalance of Dorsi- and plantar- flexors
  - Genetic predisposition
  - Fluroquinolone antibiotics
  - Inflammatory arthropathy
- Due to abnormal vascularity 2-6 cm proximal to TA insertion.
- Response to repetitive microscopic tearing of tendon

ACHILLES TENDONOPATHY

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- **Retrocalcaneal bursitis**
  - Inflammation of the bursa between the anterior aspect of the TA and posterior aspect of the calcaneus
- **Haglunds deformity**
  - Enlargement of the posterosuperior tuberosity of the calcaneus
- More common in young pt's

ACHILLES TENDONOPATHY

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Presentation
  - Pain to Achilles Tendon (TA)
    - Worse on first step off
    - Slight improvement once walking
    - Sore at end of day
    - Difficulty Tiptoeing, Sport
    - Posterior heel pain; Pain with closed heel shoe wear
    - Frequently chronic; high recurrence rate

ACHILLES TENDONOPATHY

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Presentation
  - Tender swelling to TA;
    - mid substance (Non-insertional)
    - Anterior to TA (Retrocalcaneal bursitis/ Haglunds)
    - At Calcaneum (Insertional)
  - Fullness medial & lateral to TA (Retrocalcaneal bursitis)
  - Pain with dorsiflexion/stretch
  - Bony prominence at insertion of TA (Insertional)

ACHILLES TENDONOPATHY

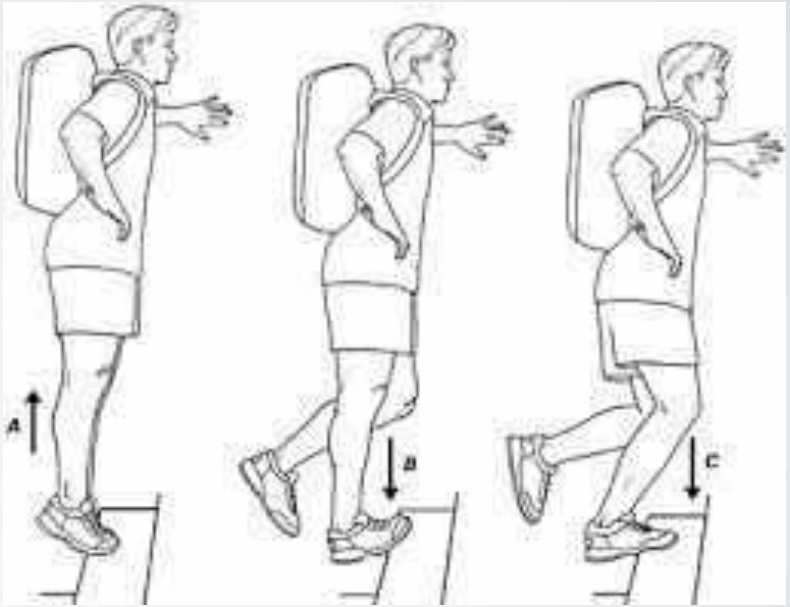
FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Investigations
  - U/S scan
  - MRI (recurrence)
  - X-Ray (Haglunds deformity)

ACHILLES TENDONOPATHY

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

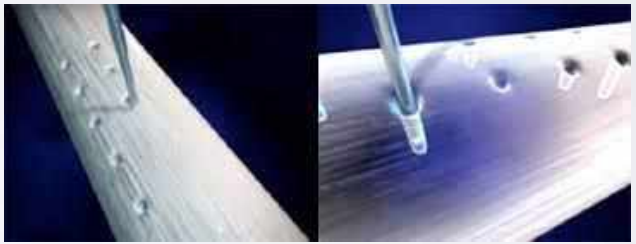
- Treatment
- 1st Line
  - Analgesia (Anti-inflammatories)
  - Physiotherapy (Excentric stretching)
  - Orthotics;
    - Heeled shoe,
    - insole (wedge)/ heel lift
    - Heel pads
  - *<u>Non-operative management is 65 - 90% successful</u>*



ACHILLES TENDONOPATHY

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- 2nd line (Refer to Ortho.)
  - Dry needling (Barbotage)
  - Shockwave
  - Topaz
  - Injections:
    - PRP
    - Steroid: retrocalcaneal bursitis (risk of TA rupture)
  - Surgical Debridement (70 - 100% successful)
  - Excision of Haglunds
  - Tendon transfer



PERONEAL TENDONOPATHY

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Swelling of Peroneal tendons/ tendon sheath
- Common site;
  - Inferior to Lateral Maleolus
  - At insertion to base of 5th Metatarsal
- Caused by abnormal loading (repetitive) of tendons

PERONEAL TENDONOPATHY

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Management
  - Rest
  - Analgesia; Oral, topical
  - Orthotics/shoe wear modification
- Investigations: US, MRI scan
- Injections;
  - Steroid
  - PRP
- Surgical Debridement, repair, tenodesis

GANGLION

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Ganglion cyst
  - Mucin filled synovial cysts
  - Filled with fluid from tendon sheath to or joint
    - Synovial herniation
- Location: anterior, medial & lateral to ankle
  - Dorsum of foot
- May fluctuate in size
- Can cause compression or irritation of adjacent structures

GANGLION

- Diagnosis:
  - Clinical: Firm, well circumscribed mass that transilluminates.
  - US/MRI
- Treatment
  - Observation
  - Aspiration + injection
    - 50% recurrence rate
  - Surgical excision
    - 10+% recurrence rate

HINDFOOT / MIDFOOT

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Subtalar & Midfoot OA
- Plantar Fasciitis
- Neuropathy;
  - Baxter’s neuropathy
  - Tarsal tunnel syndrome
- Heel ad syndrome

PLANTAR FASCIITIS

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Inflammation of a band of tissue (Plantar Fascia), that connects the heel to the toes
- Helps maintain the plantar arch of foot; medial longitudinal arch
- One of the most common causes of heel pain.

PLANTAR FASCIITIS

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Presentation
  - Stabbing heel pain, worse on first step out in the morning
    - Or standing following seated for prolonged period.
  - Pain improves on walking
  - Returns after standing or walking for prolonged period.

PLANTAR FASCIITIS

- Caused by excessive stretching of the Plantar Fascia:
  - Over-use
  - Physical activity
  - Running
  - Rapid increase in activity in short time
  - Walking/standing for long periods

PLANTAR FASCIITIS

- Risk factors;
  - Obesity
  - ^age (40 -60)
  - Shoes without insole/cushions
  - Walking barefoot on hard surfaces
  - Tight Achilles' tendon
  - More common in women

PLANTAR FASCIITIS

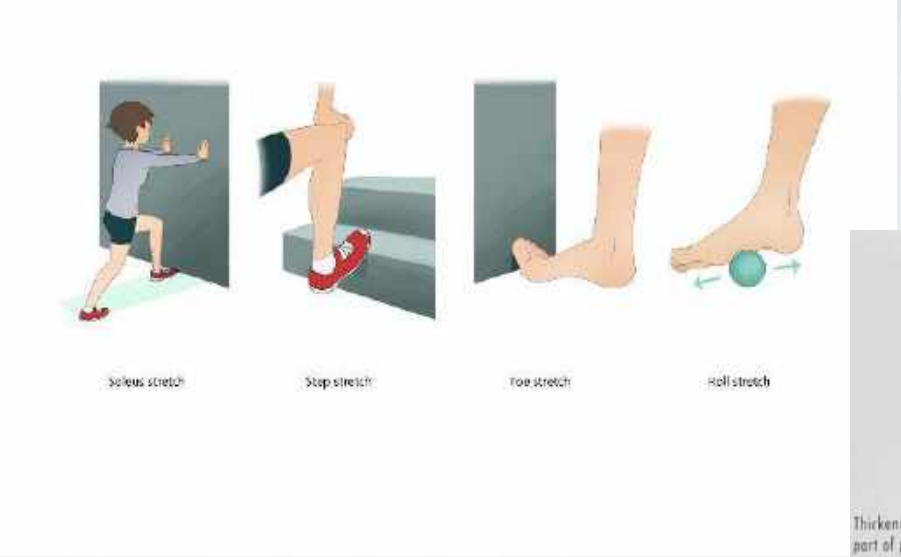
- **Theory**;
- PF shaped like bowstring, supporting arch of foot
  - Shock absorbing when you walk
  - If tension and stress becomes to great
    - Small tears to PF
    - Repeated stretching and tearing creates inflammatory reaction to PF

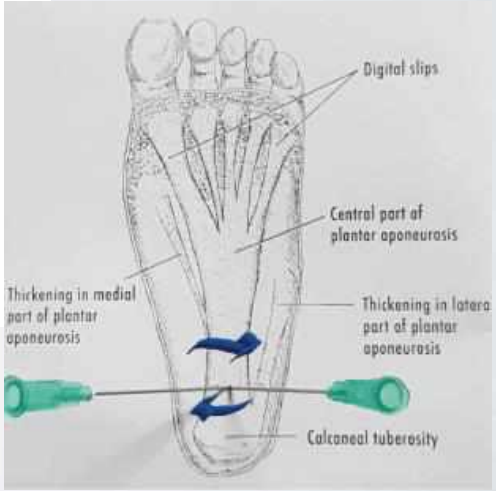
PLANTAR FASCIITIS

- Diagnosis:
- History & clinical exam
  - Pain and tenderness to origin of PF
  - Pain on stretch of PF
- Imaging not usually necessary; US, MRI
  - Useful to rule out other causes of heel pain
    - Heel pad syndrome
    - Baxter's neuropaty

PLANTAR FASCIITIS

- **Management**
- NSAID; oral + topical
- Physiotherapy therapy
  - Stretching exercises;
    - In morning before standing
    - Roll ball under foot
    - Night splints
- Injections: Steroid vs PRP
- TA lengthening (if tight)
- PF release

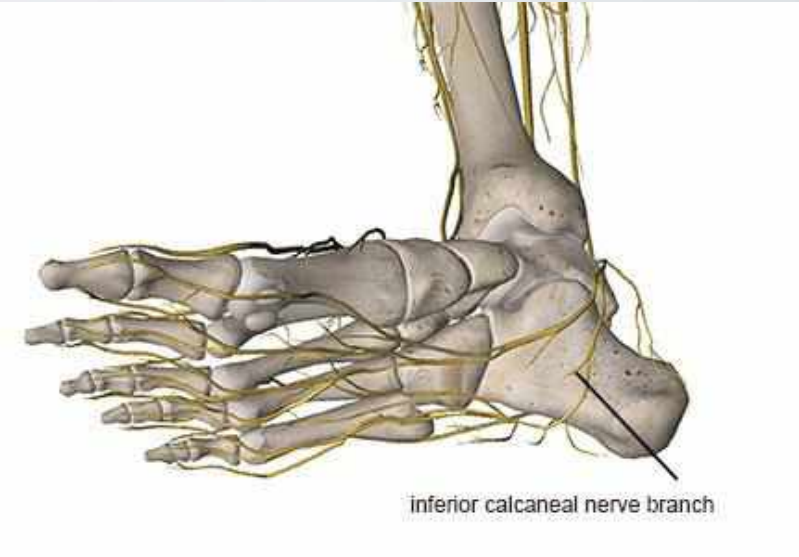




BAXTER'S NEUROPATHY

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

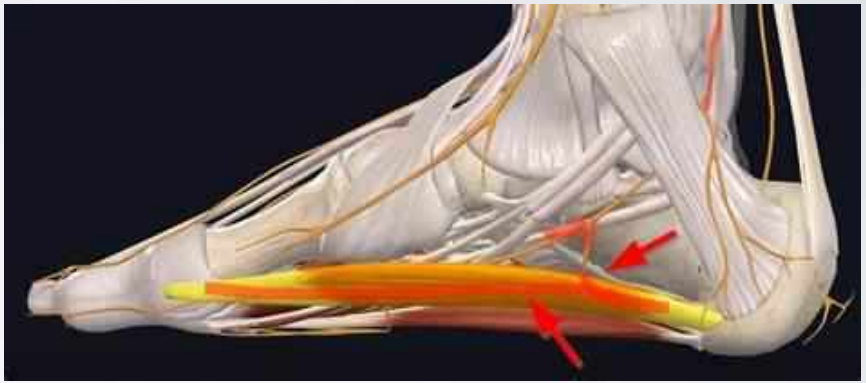
- Impingement of the inferior Calcaneal nerve
    - Branch of lateral plantar nerve
        - Branch of Tibial nerve
- Can be responsible for up to 20% of heel pain
- Parenthesis with motor weakness to Abductor Digiti minimi



BAXTER'S NEUROPATHY

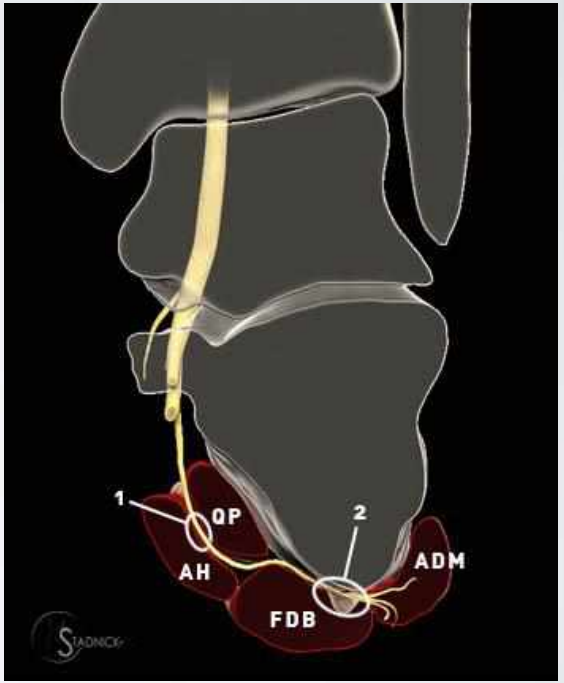
FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- 3 sites of compression
  - Fasciae edge of the hypertrophied Abductor Hallucis muscle
  - Along medial edge of Quadratus Plantar muscle
  - Adjacent to medial Calcaneal tuberosity



BAXTER'S NEUROPATHY

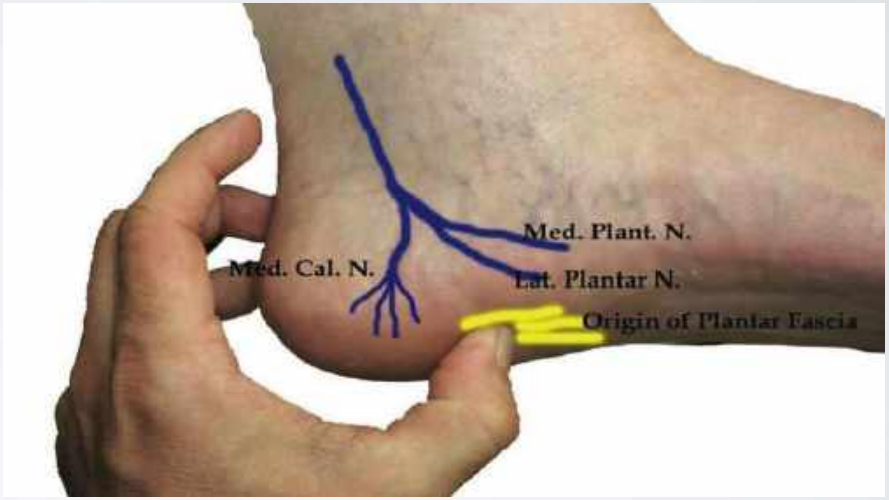
- Presentation
  - (Opposit to PF)
  - NO pain in the morning - First step
  - Pain gets worse on walking and to end of day
    - Impact irritating nerve
  - Numbness and tingling along bottom of heel



BAXTER'S NEUROPATHY

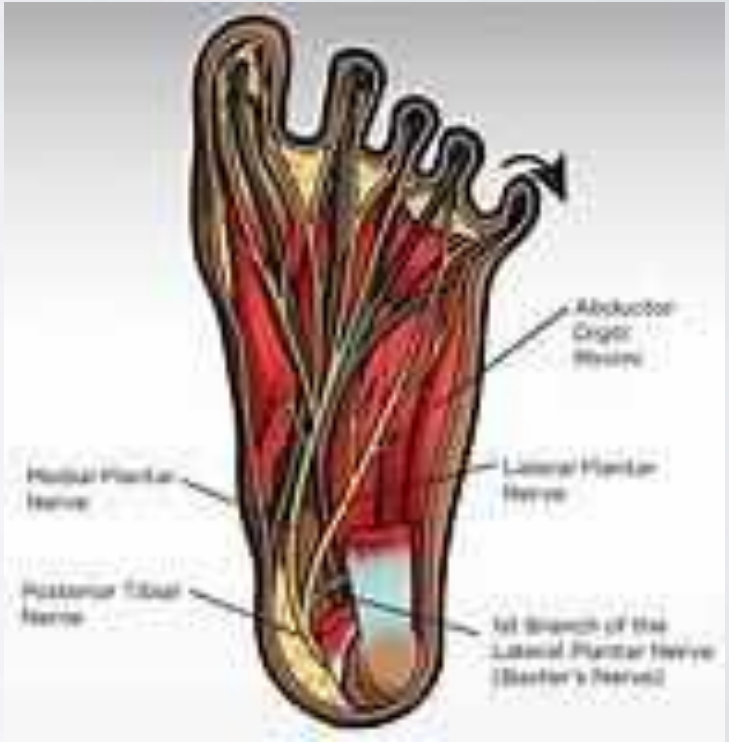
FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Diagnosis
  - Pain on palpating along course of nerve
  - Xray; bone spur
  - US, MRI:
    - inflammation of nerve
    - Hypertrophy of Abd. Hallucis muscle
    - Atrophy of Abd. Digiti Minimi



BAXTER'S NEUROPATHY

- Management
  - NSAIDS
  - Neuropathic pain medication
    - Eg: Gabapentin, Pregabalin
  - Orthotics; Insoles especially for flat feet
  - Steroid Injections
  - Surgical decompression



TARSAL TUNNEL SYNDROME

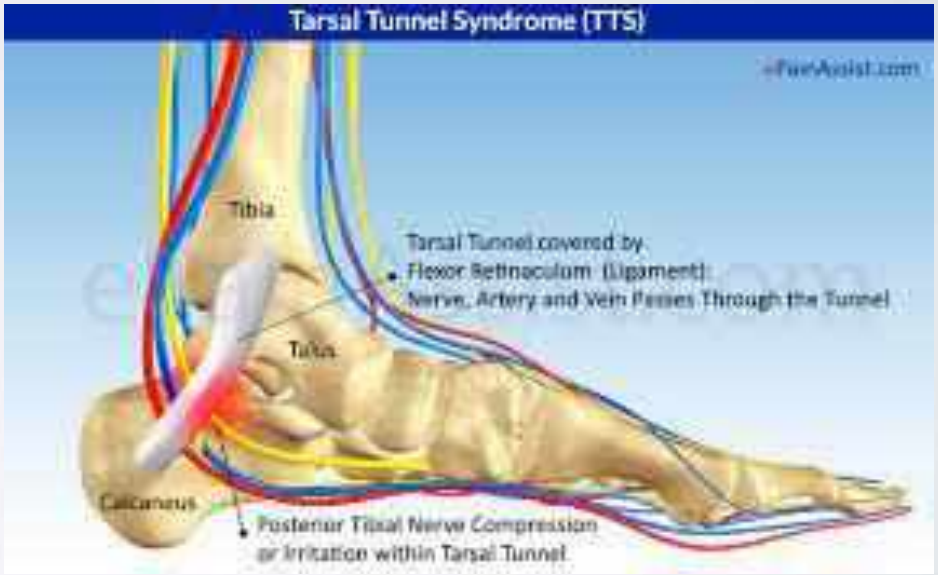
FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Compressive neuropathy of the Tibial nerve
    - At level of Tarsal Tunnel
- Pain and parasthesia to plantar aspect of foot
- ‘Burning plantar foot pain’

TARSAL TUNNEL SYNDROME

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Causes of impinge to:
  - Intrinsic
    - Ganglion
    - Tendonopathy
    - Lipoma/tumour
    - Osteophytes
  - Extrinsic
    - Shoes
    - Trauma



TARSAL TUNNEL SYNDROME

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Anatomy
  - Posterior Tarsal tunnnel
    - Flexor retinaculum
  - Contents
    - Tibial nerve
    - Posterior Tibial Artery
    - FHL
    - FDL
    - Tib. Post. Tendon

TARSAL TUNNEL SYNDROME

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Presentation
  - Pain with prolonged standing or walking
  - Sharp, burning pain to foot
  - Intermittent numbness to plantar foot

TARSAL TUNNEL SYNDROME

- Exam
  - Tenderness to percussion of Tibial nerve
    - Tinel's
  - Pain with dorsiflexion and version of ankle
- Investigation
  - US/MRI
  - EMG

TARSAL TUNNEL SYNDROME

- Management
  - NSAIDS
  - Orthotics (flat feet)
  - Treat underlying cause
  - Steroid injections
  - Surgery; Tarsal Tunnel release

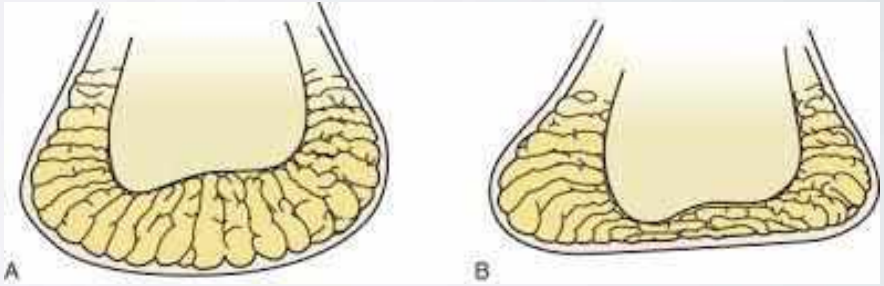
HEEL PAD SYNDROME

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Deep dull aching to heel
- Atrophy of the heel pad
- Second leading cause of Plantar heel pain
    - PF leading cause

HEEL PAD SYNDROME

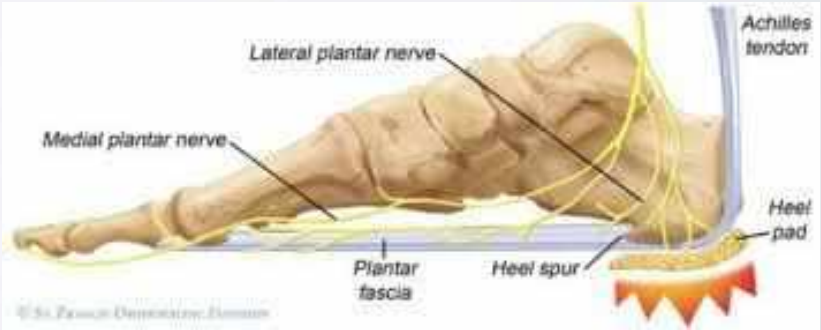
- Heel fat pad is specialised structure
  - Fat tissue enclosed in ligament outs chambers
  - Acts as cushion / shock absorber for walking / running etc
  - Mechanical anchor that distributes weight evenly over heel



HEEL PAD SYNDROME

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Caused by changes in the elasticity and thickness of heel pad
- Risk factors: *STEROID INJECTIONS*
  - ^ age
  - Trauma / repetitive injury
  - Obesity
  - Poor gait
  - Poor footwear
  - Family history



HEEL PAD SYNDROME

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Symptoms;
  - Deep dull ache to heel
  - Feels like ‘bruise’ in heel
  - Pain on pressing Center of heel
  - Worsens with prolonged standing/ walking/ running, esp barefoor

HEEL PAD SYNDROME

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Investigations
  - X-Ray
  - US / MRI
- Management
  - Aimed at preserving fat pad
  - Activity modification (rest)
  - Shoe wear / Orthotics
  - Physiotherapy / massage
  - NSAIDS

FOREFOOT

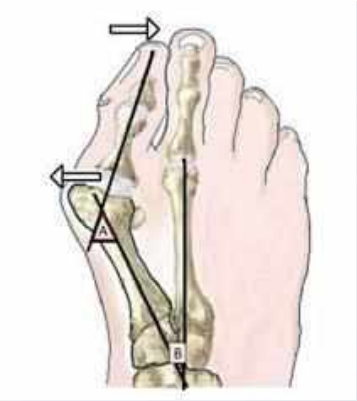
FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Hallux Valgus
- Neuroma (Mortons)
- Metatarsalgia
- Lesser toe deformity

HALLUX VALGUS (BUNION)

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Complex Valgus deformity of the First ray
- Causes medial big toe pain and difficulty with shoe wear
- Medial deviation of 1st Metatarsal with lateral deviation of great toe.
- Can lead to 2nd toe elevation and overriding Great toe



HALLUX VALGUS (BUNION)

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Risk factors
  - Genetic (70%)
  - Ligamentous laxity (1st TMTJ instability)
  - Pes planus (flat feet)
  - Rheumatoid Arthritis
  - Shoe wear; high heel with narrow toebox

HALLUX VALGUS (BUNION)

- Physical exam; diagnostic
- Management;
  - Pads, straps, splints, spacers
  - Shoe wear modification
    - Wide toe box shoes
  - Surgical

NEUROMA (MORTONS)

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

- Benign neuroma of an intermetatarsal plantar nerve
- Most commonly 2nd and 3rd web space
- Pain and numbness to forefoot & affected toes

NEUROMA (MORTONS)

- Symptoms
  - Pain to forefoot on weight bearing
  - Walking on razor blades; burning, numbness
- Tests
  - Moulder’s sign, ‘Click’
    - Compression of forefoot with ballotment of webspace

NEUROMA (MORTONS)

- Investigation
  - U/S
  - MRI
  - Xray

NEUROMA (MORTONS)

- Management
  - Shoe wear modification
  - Orthotics
  - NSAIDS
  - Steroid injection
    - US guided ideally
  - Surgery

FREEDOM TO WALK
LIMB RECONSTRUCTION, KNEE, FOOT & ANKLE SURGEON

“Thank you”

Mr. Dominic Sprott

Osteoarthritis hand & wrist - what can we do?

Mr David Murray

MR DAVID MURRAY
Hand surgeon

Osteoarthritis in the Hand & Wrist

Mr David Murray
Consultant Hand, Wrist & Elbow Surgeon

Osteoarthritis in the Hand & Wrist

- Introduction
    - My Practice

- Arthritis in Hand & Wrist
    - 1st CMCJ
    - Radio-carpal / Midcarpal
    - MCPJ
    - PIPJ
    - DIPJ

- Questions

MR DAVID MURRAY
Understanding your condition

Osteoarthritis in the Hand & Wrist

- Who am I?

  - Consultant Hand, Wrist & Elbow Surgeon

  - Honorary Lecturer Salford University

  - BSSH Member

  - Manchester University 2004

  - NHS Practice in Manchester

MR DAVID MURRAY

Understanding your condition

Osteoarthritis in the Hand & Wrist

- Who am I?

  - Raised in Mawdsley

  - Grew up in the Lake District

  - Married with 3 children

MR DAVID MURRAY

Understanding your condition

Osteoarthritis in the Hand & Wrist

- The Euxton Hall Hospital

  - Ramsay Healthcare

  - 2 x Operating Theatres

  - Xray, USS, CT and MR scanning

  - Nerve Conduction Studies etc

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Understanding your condition

Osteoarthritis in the Hand & Wrist

- Primary Osteoarthritis –
    - Age related
        - 90% over 80 yrs
        - Rapid progression > 60 yrs
    - Gender
        - F>M
    - Genetics
    - Occupation
    - Obesity

MR DAVID MURRAY
Understanding your condition

Osteoarthritis in the Hand & Wrist

- Secondary Osteoarthritis –

  - Infection
    - Septic arthritis

  - Post Trauma
    - Distal Radius
    - Bennett's Fractures

  - Hyperlaxity
  - Co-morbidities
    - Haemochromatosis

MR DAVID MURRAY
Understanding your condition

Osteoarthritis in the Hand & Wrist

- Types of Arthritis

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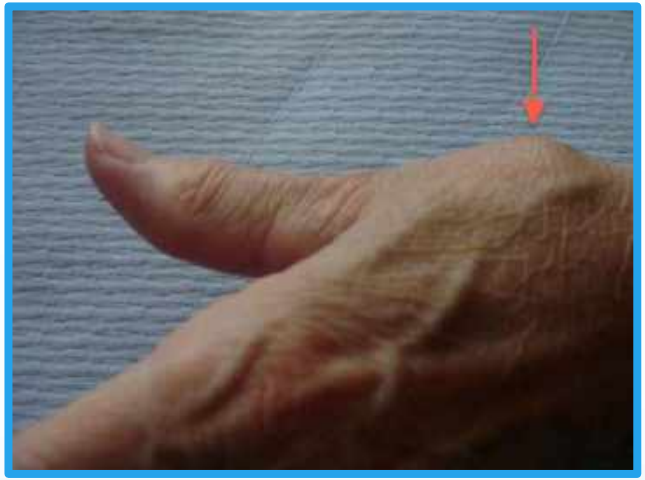
Understanding your condition

Osteoarthritis in the Hand & Wrist

- Types of Arthritis



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Osteoarthritis in the Hand & Wrist

- Types of Arthritis

MR DAVID MURRAY

Understanding your condition

Osteoarthritis in the Hand & Wrist

- Types of Arthritis

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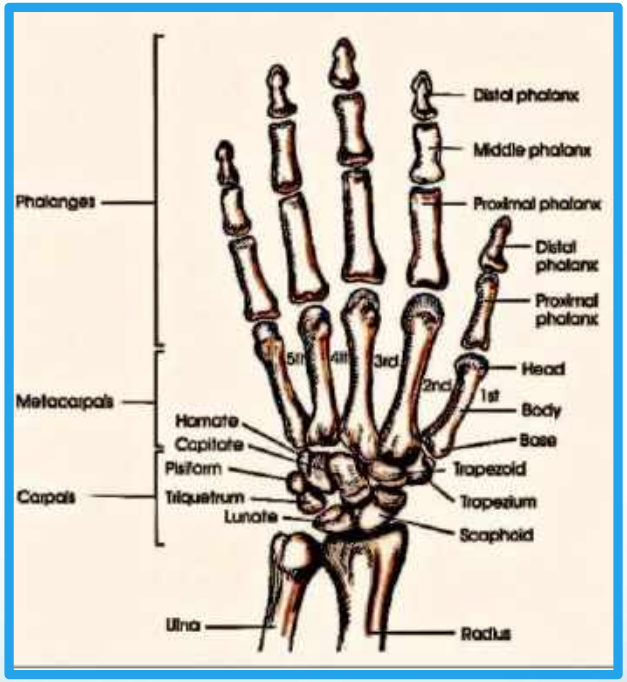
Understanding your condition

Osteoarthritis in the Hand & Wrist

- Osteoarthritis



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Osteoarthritis in the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

  - Base of Thumb

  - Wrist

  - Proximal Finger Joints

  - Distal Finger Joints

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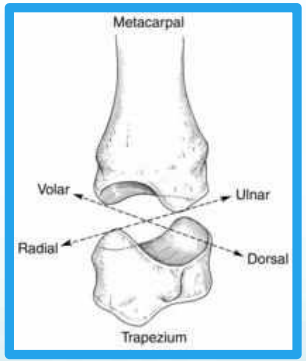
Understanding your condition

Osteoarthritis in the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- Base of Thumb

- 2 out of 10 Women 50-60 suffer pain
- > 2/3 of over 55 show Xray changes



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Understanding your condition

Osteoarthritis in the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist
  - Base of Thumb

MR **DAVID MURRAY**

Understanding your condition

Osteoarthritis in the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- Base of Thumb – Radiographic Grading

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Osteoarthritis in the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- Base of Thumb – Radiographic Grading

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Understanding your condition

Osteoarthritis in the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- Base of Thumb – Typical Presentation

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Understanding your condition

- Most Common Areas of Arthritis in Hand and Wrist

- Base of Thumb - Treatment

- Treatment ladder

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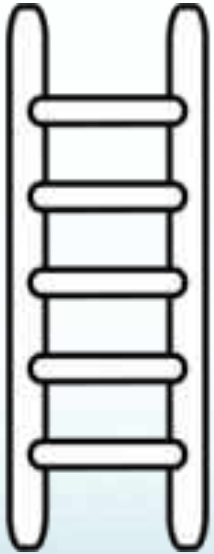
- Most Common Areas of Arthritis in Hand and Wrist

- Base of Thumb - Treatment



Painkillers – Ibupofen / Paracetamol

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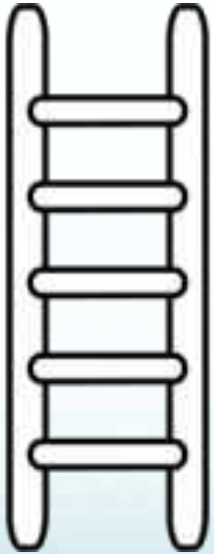
Understanding your condition

- Most Common Areas of Arthritis in Hand and Wrist

- Base of Thumb - Treatment



Hand Therapy – Exercises / Splints

Painkillers – Ibupofen / Paracetamol

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Understanding your condition

Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- Base of Thumb - Splints

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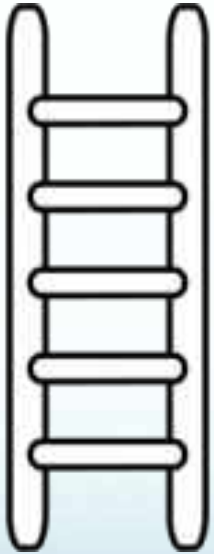
Understanding your condition

- Most Common Areas of Arthritis in Hand and Wrist

- Base of Thumb - Treatment



- Steroid Injections
- Hand Therapy – Exercises / Splints
- Painkillers – Ibupofen / Paracetamol

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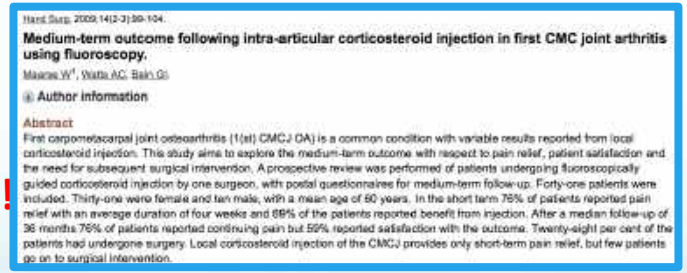
Understanding your condition

- Most Common Areas of Arthritis in Hand and Wrist

  - Base of Thumb – Steroid Injections

  - How effective?
    - Varies
      - Age
      - Stage
      - Occupation
      - Expectation



Hand Surg. 2009;14(2-3):99-104.

Medium-term outcome following intra-articular corticosteroid injection in first CMC joint arthritis using fluoroscopy.

Maurice W[1], Watts AC, Bain GI.

Author information

Abstract

First carpometacarpal joint osteoarthritis (1(st) CMCJ OA) is a common condition with variable results reported from local corticosteroid injection. This study aims to explore the medium-term outcome with respect to pain relief, patient satisfaction and the need for subsequent surgical intervention. A prospective review was performed of patients undergoing fluoroscopically guided corticosteroid injection by one surgeon, with postal questionnaires for medium-term follow-up. Forty-one patients were included. Thirty-one were female and ten male, with a mean age of 60 years. In the short term 76% of patients reported pain relief with an average duration of four weeks and 68% of the patients reported benefit from injection. After a median follow-up of 36 months 76% of patients reported continuing pain but 59% reported satisfaction with the outcome. Twenty-eight per cent of the patients had undergone surgery. Local corticosteroid injection of the CMCJ provides only short-term pain relief, but few patients go on to surgical intervention.

  - Xray is important!

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Understanding your condition

- Most Common Areas of Arthritis in Hand and Wrist

- Base of Thumb – Steroid Injections

Int J Clin Pract. 2003 May;57(4):265-6.

Accuracy of intra-articular injections for osteoarthritis of the trapeziometacarpal joint.

Helm AT[1], Higgins G, Balkumar P, Redfern DR

Author information

Abstract

A study was conducted to determine the accuracy of intra-articular injections for osteoarthritis (OA) of the trapeziometacarpal joint (TMCJ). Over a period of 12 months intra-articular injections on 60 TMCJs (12 males and 48 females) were carried out. All the injections were performed in the operating theatre. The operator inserted the needle into the position clinically assessed to be the TMCJ and the position was assessed using biplanar fluoroscopy. In 42% of cases, the needle was incorrectly placed and its position had to be adjusted, using fluoroscopy, to ensure correct intra-articular placement. Entry into an osteoarthritic TMCJ with a blind passage of the needle is not straightforward. A proper injection technique must be employed to enter the correct joint. Using an image intensifier greatly facilitates accurate needle placement.

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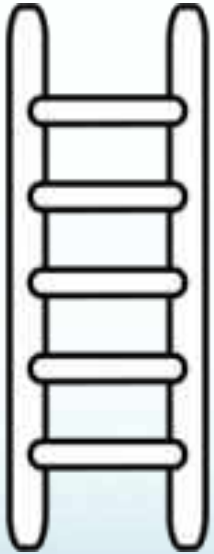
- Most Common Areas of Arthritis in Hand and Wrist

- Base of Thumb - Treatment



- Surgery
- Steroid Injections
- Hand Therapy – Exercises / Splints
- Painkillers – Ibupofen / Paracetamol

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- Most Common Areas of Arthritis in Hand and Wrist

- Base of Thumb - Surgery

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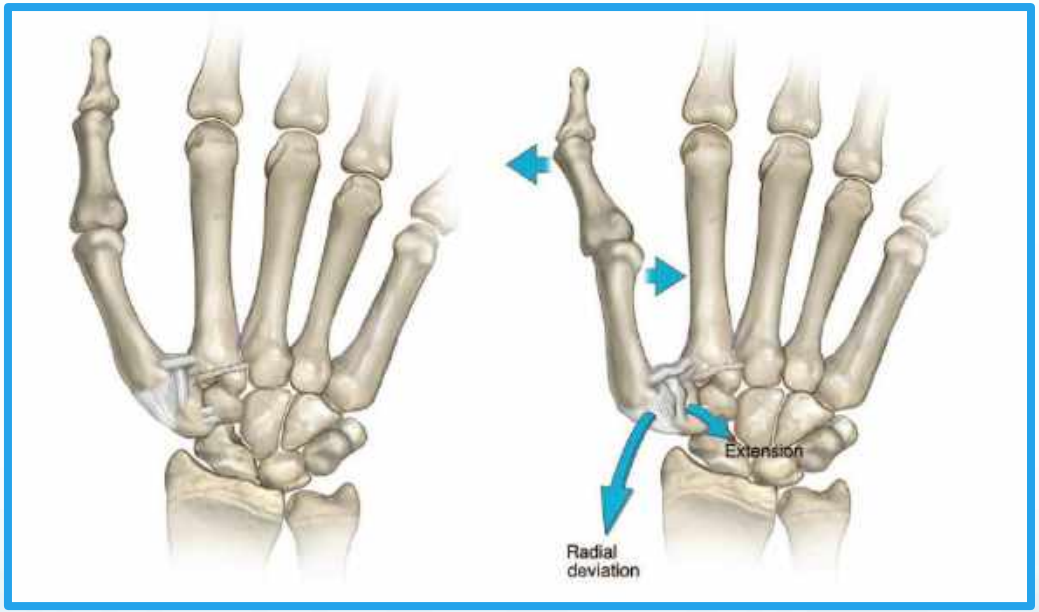
- Most Common Areas of Arthritis in Hand and Wrist



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- Most Common Areas of Arthritis in Hand and Wrist

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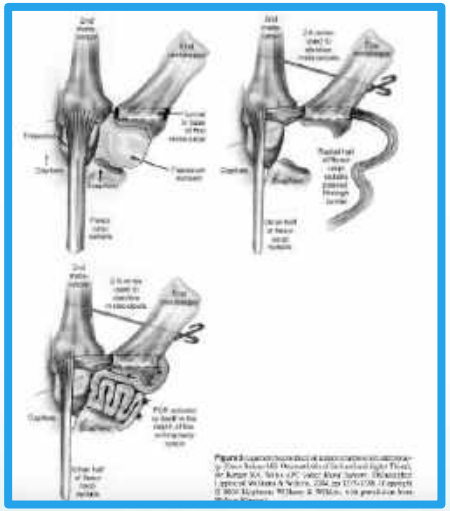
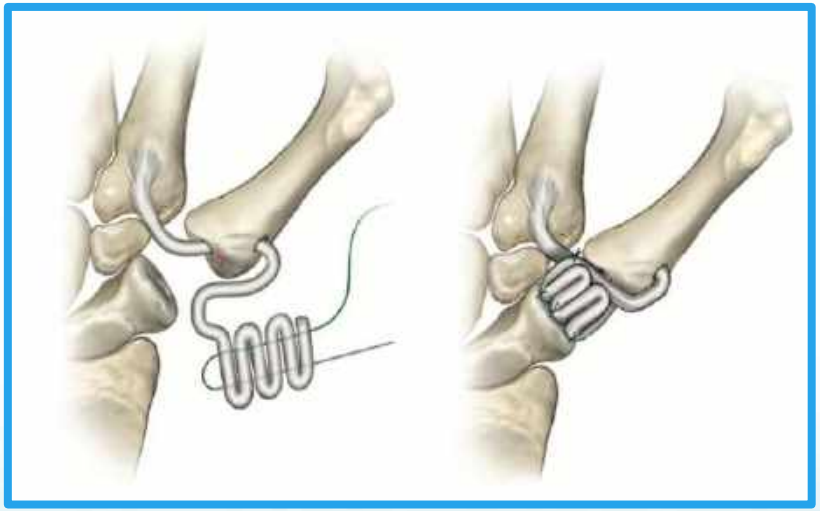
- Most Common Areas of Arthritis in Hand and Wrist

- Base of Thumb - Surgery





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Understanding your condition

- Most Common Areas of Arthritis in Hand and Wrist

- Base of Thumb - Surgery

J Hand Surg Am. 2012 Mar;37(3):411-7. doi: 10.1016/j.jhsa.2011.11.027. Epub 2012 Feb 3.

Five- to 18-year follow-up for treatment of trapeziometacarpal osteoarthritis: a prospective comparison of excision, tendon interposition, and ligament reconstruction and tendon interposition.

Gangopadhyay S[1], McKenna H, Burke FD, Davis TR

⊕ Author information

Abstract

PURPOSE: To investigate whether palmaris longus interposition or flexor carpi radialis ligament reconstruction and tendon interposition improve the outcome of trapezial excision for the treatment of basal joint arthritis after a minimum follow-up of 5 years.

METHODS: We randomized 174 thumbs with trapeziometacarpal osteoarthritis into 3 groups to undergo simple trapeziectomy, trapeziectomy with palmaris longus interposition, or trapeziectomy with ligament reconstruction and tendon interposition using 50% of the flexor carpi radialis tendon. A K-wire was passed across the trapezial void and retained for 4 weeks, and a thumb spica was used for 6 weeks in all 3 groups. We reviewed 153 thumbs after a minimum of 5 years (median, 6 y; range, 5-18 y) after surgery with subjective and objective assessments of thumb pain, function, and strength.

RESULTS: There was no difference in the pain relief achieved in the 3 treatment groups, with good results in 120 (78%) patients. Grip strength and key and tip pinch strengths did not differ among the 3 groups and range of movement of the thumb was similar. Few complications persisted after 5 years, and these were distributed evenly among the 3 groups. Compared with the results at 1 year in the same group of patients, the good pain relief achieved was maintained in the longer term, irrespective of the type of surgery. While improvements in grip strength achieved at 1 year after surgery were preserved, the key and tip pinch strengths deteriorated with time, but the type of surgery did not influence this.

CONCLUSIONS: The outcomes of these 3 variations of trapeziectomy were similar after a minimum follow-up of 5 years. There appears to be no benefit to tendon interposition or ligament reconstruction in the longer term.

- Most Common Areas of Arthritis in Hand and Wrist

- Base of Thumb – Suspensionplasty

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Understanding your condition

- Most Common Areas of Arthritis in Hand and Wrist

- Base of Thumb - Surgery

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- Most Common Areas of Arthritis in Hand and Wrist

- Base of Thumb - Surgery

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- Most Common Areas of Arthritis in Hand and Wrist

- Base of Thumb - Surgery

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- Most Common Areas of Arthritis in Hand and Wrist

- Base of Thumb - Surgery

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- Most Common Areas of Arthritis in Hand and Wrist

- Base of Thumb - Surgery

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Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

  - Wrist

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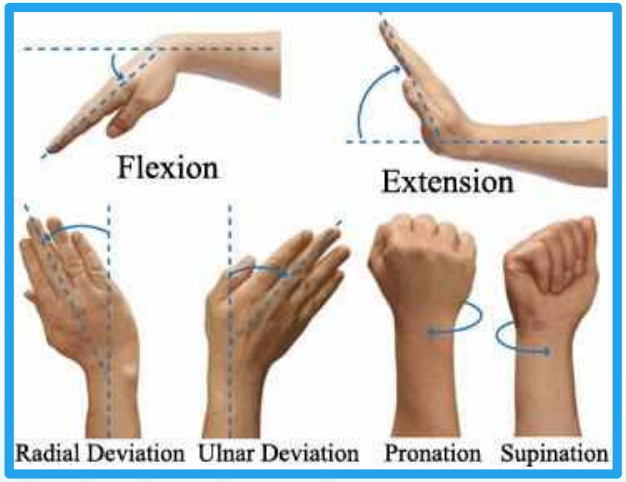
Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- Wrist



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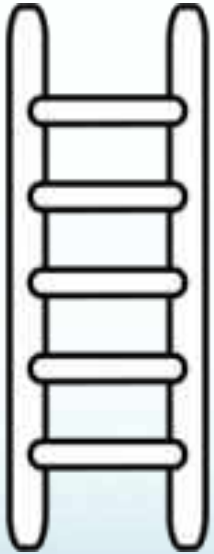
Understanding your condition

Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- Wrist - Treatment



Surgery

Steroid Injections

Hand Therapy – Exercises / Splints

Painkillers – Ibupofen / Paracetamol

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Understanding your condition

Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- Wrist – Surgery –

  - Fuse the Joint – Arthrodesis
    - Total / Partial

  - Replace the Joint – Arthroplasty

  - Excise part of the Joint – Excision Arthroplasty

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Understanding your condition

Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- Total Fusion

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Understanding your condition

Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- Total Fusion

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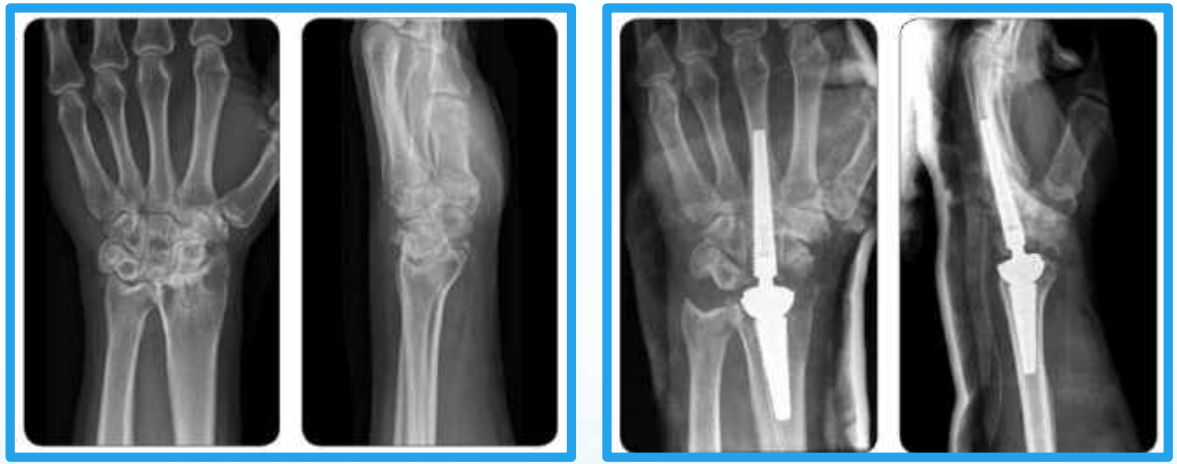
Understanding your condition

Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- Wrist Replacement



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Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- Wrist Replacement

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Understanding your condition

Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- Wrist Replacement

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Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- Wrist Replacement

- Mainly for inflammatory arthropathy
- Mixed results

- Not perfect

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Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

  - Post- Traumatic
    - Scaphoid fractures
    - SLL instability

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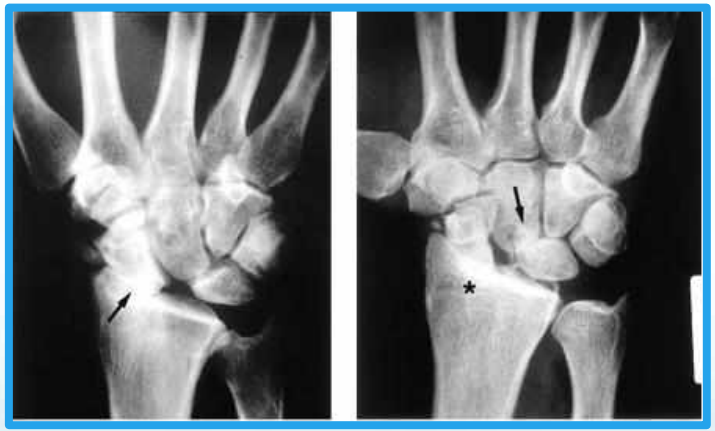
Understanding your condition

Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

  - Post- Traumatic
    - Scaphoid fractures (SNAC)
    - SLL instability (SLAC)



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Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- If no capitate lunate OA – Can perform a PRC

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Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- If capitate shows arthritis – 4 CORNER FUSION

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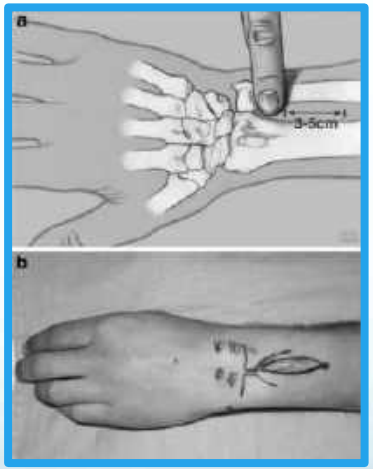
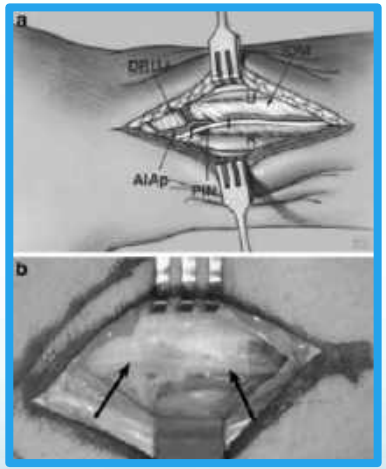
Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- Other options?

- PIN/AIN neurectomy –





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Understanding your condition

Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- Finger Joints

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Understanding your condition

Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- PIPJ

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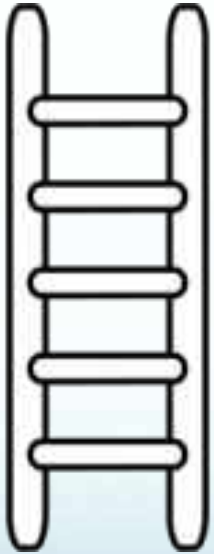
Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- PIPJ - Treatment



- Surgery
- Steroid Injections
- Hand Therapy – Exercises / Splints
- Painkillers – Ibupofen / Paracetamol

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Understanding your condition

Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

  - PIPJ

    - Replace
      Hard / Soft

    - Fuse
      Wire / Screws

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Understanding your condition

Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- PIPJ – Hard Replacement

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Understanding your condition

Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- PIPJ – Soft Replacement

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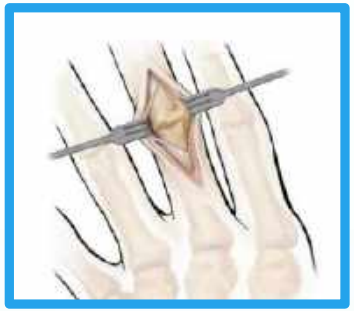
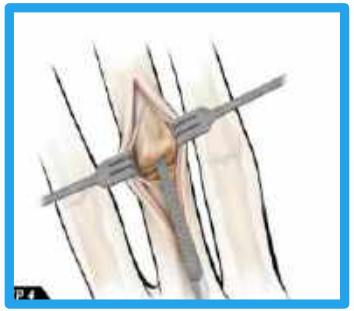
Understanding your condition

Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- PIPJ – Soft Replacement





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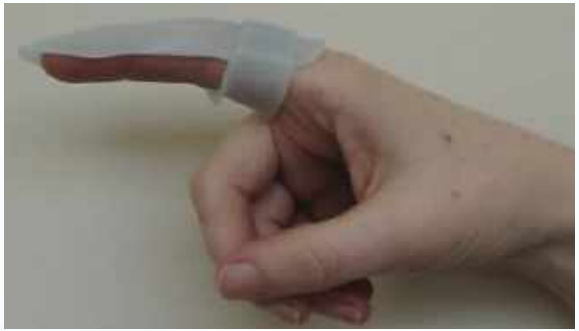
Understanding your condition

Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist



MR DAVID MURRAY

Understanding your condition

Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- PIPJ – Fusion

MR DAVID MURRAY
Understanding your condition

Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- DIPJ –

- Only Surgical option is Fusion

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52 ALDERLEY THE WILMSLOW HOSPITAL

Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- DIPJ –

- Only Surgical option is Fusion

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Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- DIPJ –

- Only Surgical option is Fusion

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Understanding your condition

Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- DIPJ – Complication can be small cysts -

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Understanding your condition

Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- DIPJ – Mucous cysts -

MR **DAVID MURRAY**

Understanding your condition

Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- DIPJ – Mucous cysts –
- Rotational flap under LA

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Understanding your condition

Arthritis of the Hand & Wrist

- Most Common Areas of Arthritis in Hand and Wrist

- DIPJ – Mucous cysts –
  - Rotational flap under LA

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Understanding your condition

Thankyou

Questions

MR DAVID MURRAY

Hand surgeon

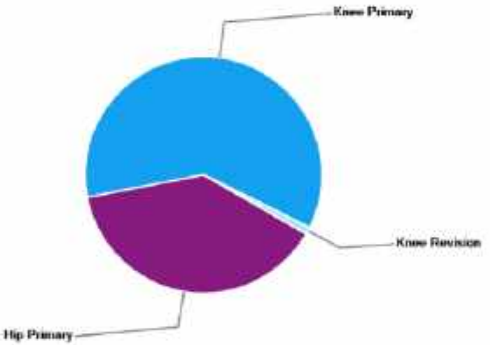
Everything you need to know about hips in primary care

Marcus Cope MBBS MRCS MSc (Mech Eng) FRCS (Orth)

Introduction

- Qualified from Newcastle in 1996
- Trained in North West, Yorkshire, Merseyside and South Australia
- Southport & Ormskirk NHS Trust 2007-17
- Clinical director Orthopaedics 2013-7
- Specialise in primary hip and knee replacements
- Pre Covid was performing 403 joints
- Elogbook approaching 9000 cases

Data for 1 April 2019 - 31 March 2020



Operation Type	Operation Subcategory	Procedures Recorded for this Surgeon	National Average
Hip Primary	-	158	50
Knee Primary	Patello-Femoral Replacement	9	4
Knee Primary	Total knee replacement	188	54
Knee Primary	Unicondylar Knee Replacement	48	18
Knee Revision	-	Fewer Than 5	7
Total	-	403+	136

Ramsay Health Care

Introduction

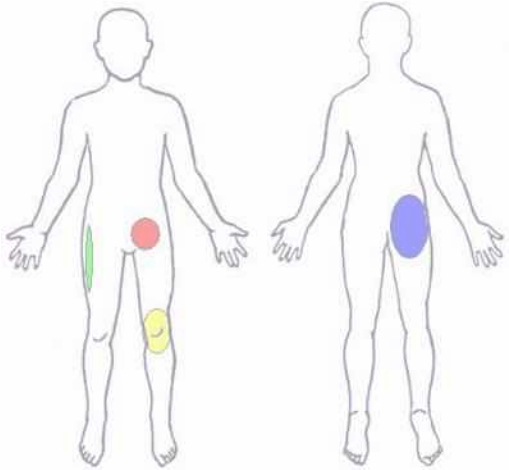
- Typical presentations of hip problems
- When to operate
- Post op hip

Ramsay Health Care

Typical presentations

Start by determining whether pain is located in the:

- Anterior
- Lateral
- Posterior
- Knee



As the site varies, so does the aetiology.

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History

Besides location

- consider sudden vs insidious onset
- motions and positions that reproduce pain
- predisposing activities
- effect of weight bearing

Ramsay Health Care

Physical examination

LOOK

- Gait
- Pelvis on standing
- Scars / sinuses / skin colouring

FEEL

- Site of tenderness anterior / medial / lateral

MOVE

- elucidate range of motion
- muscle strength
- pain replication

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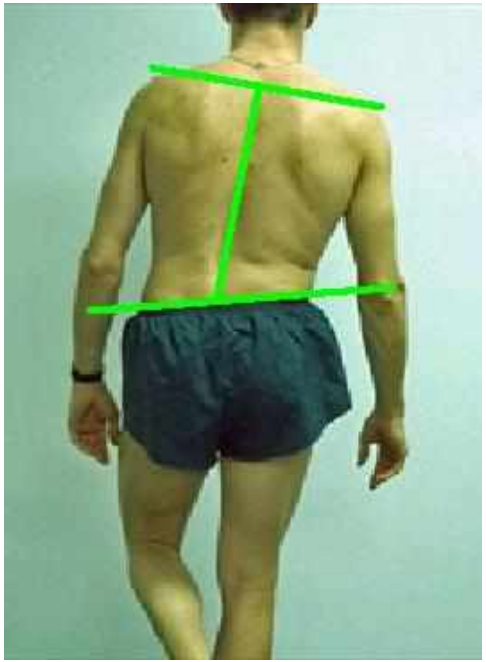
LOOK

Pelvis on standing



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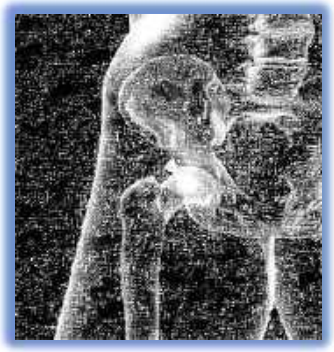
Anterior groin pain



- Most common
- Usually indicates pathology of the hip joint
  - degenerative arthritis
  - hip flexor muscle strains or tendonitis
  - iliopsoas bursitis
  - Snapping hip – psoas tendon
  - Labral tears
  - Femoroacetabular impingement (FAI)
  - Hernias

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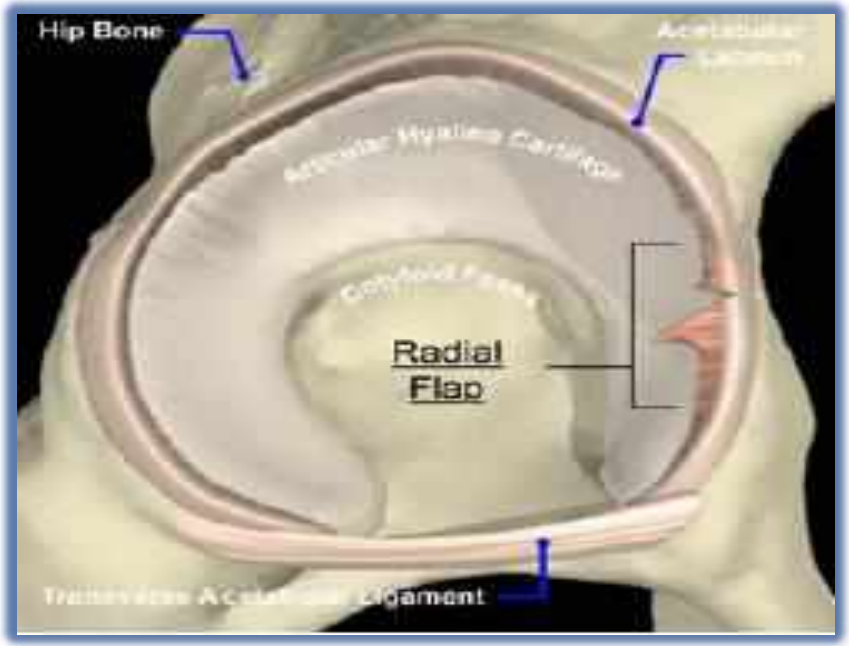
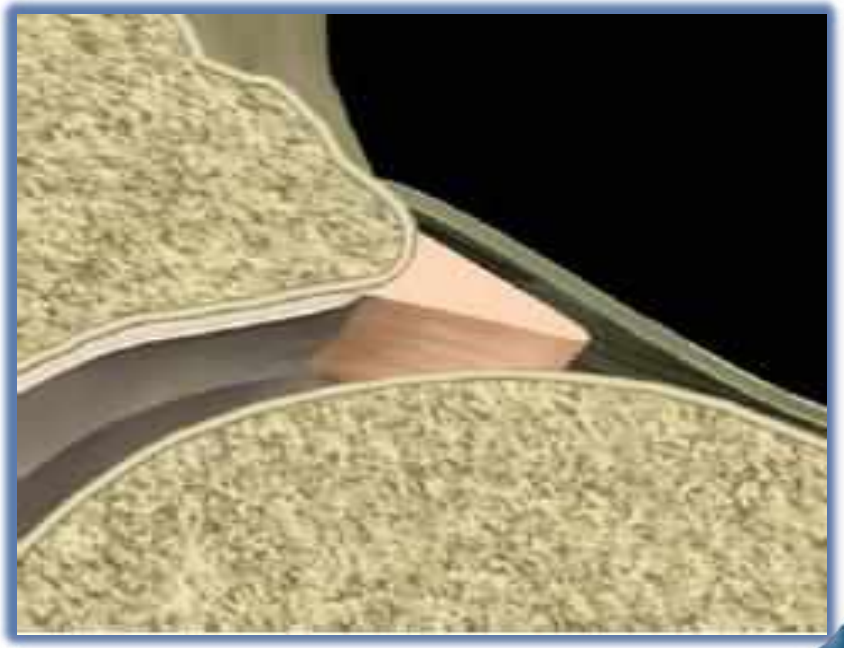
Labral tear





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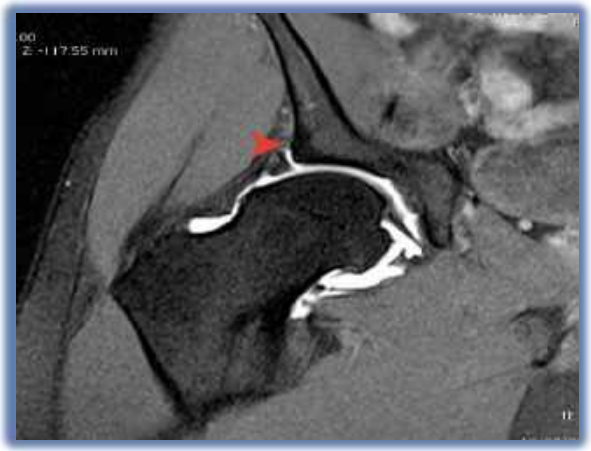
Labral tear

- MRI arthrogram
  - Intra articular hip pathology
  - Labral tears (RARE)



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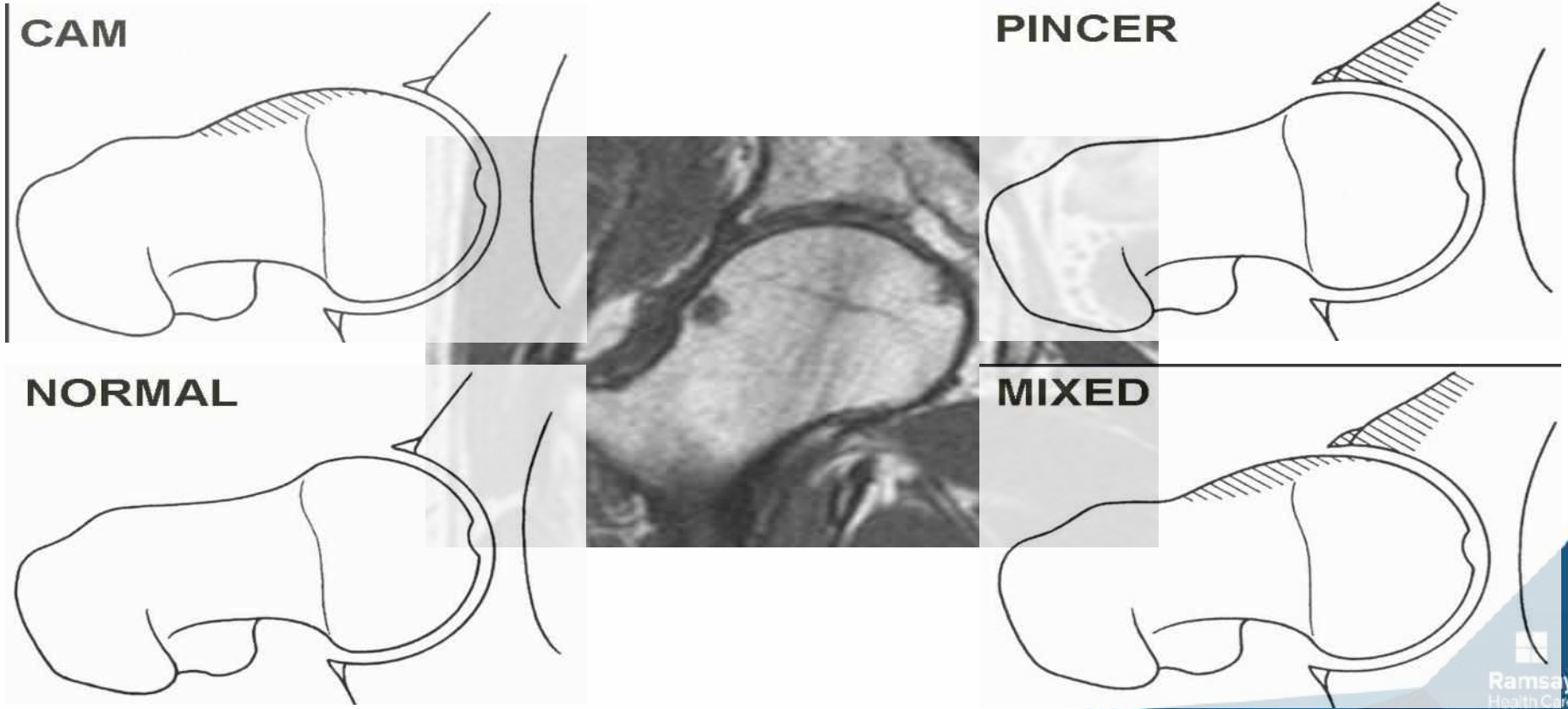
Health Care

femoroacetabular impingement



mixed cam and pincer

Before

After

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Lateral hip pain

- Greater trochanteric bursitis
- Gluteus medius tendinitis
- Gluteus medius tears
- Snapping hip (iliotibial band)
- Meralgia paraesthetica

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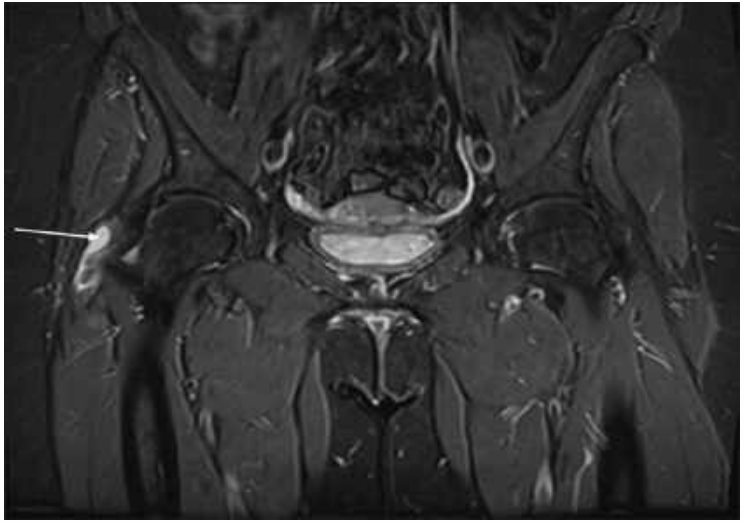
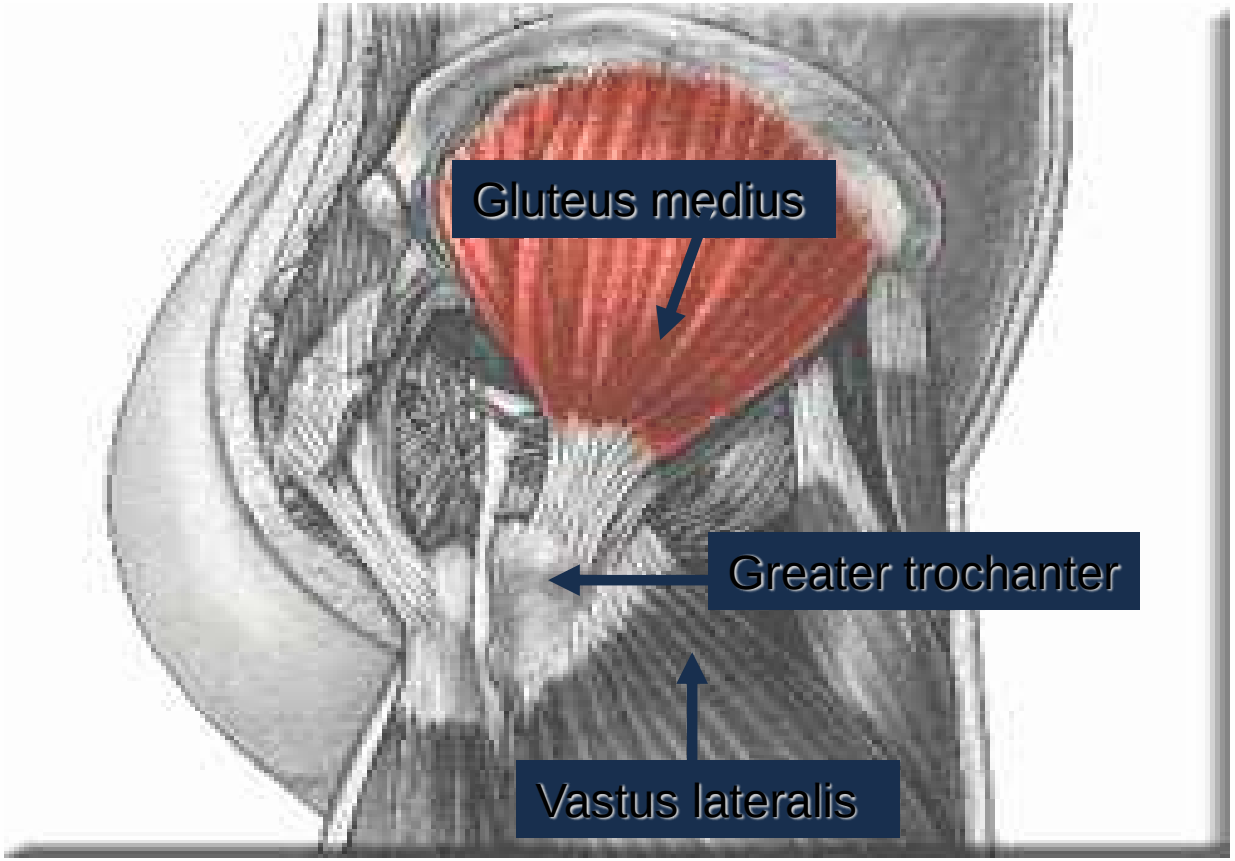
Health Care

Trochanteric pain

- Not just bursitis
- MRI study of 24 women
- 45.8% gluteus medius tear
- 62.5% gluteus medius tendonitis



Ramsay
Health Care



Lateral hip

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Health Care

trochanteric bursitis

- Said to be the commonest soft tissue lesion around the hip area.
- Causes: overuse
  - excessive running
  - overweight females with degenerative spinal problems
- Three steroid injections if fails then consider surgery.

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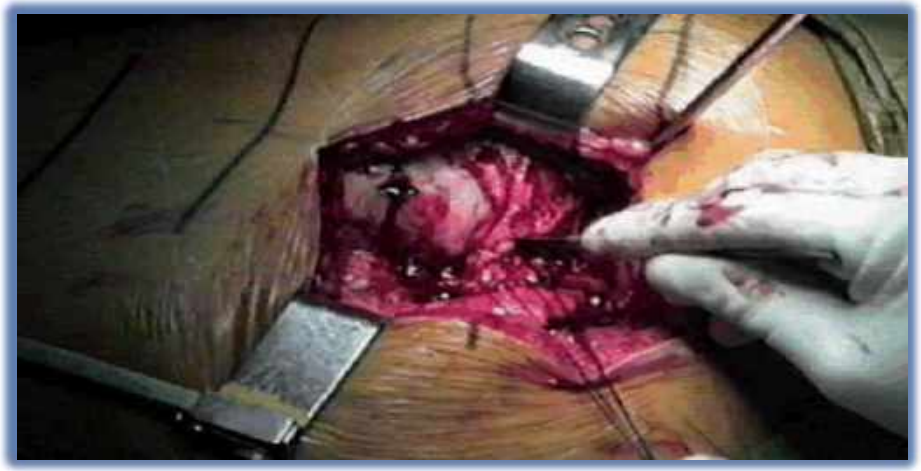

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meralgia paraesthetica

- Entrapment syndrome of the lateral femoral cutaneous nerve
- Occurs more frequently in middle age
- Characterized by hyperesthesia in the anterolateral thigh
- Although a quarter also complain of lateral hip pain

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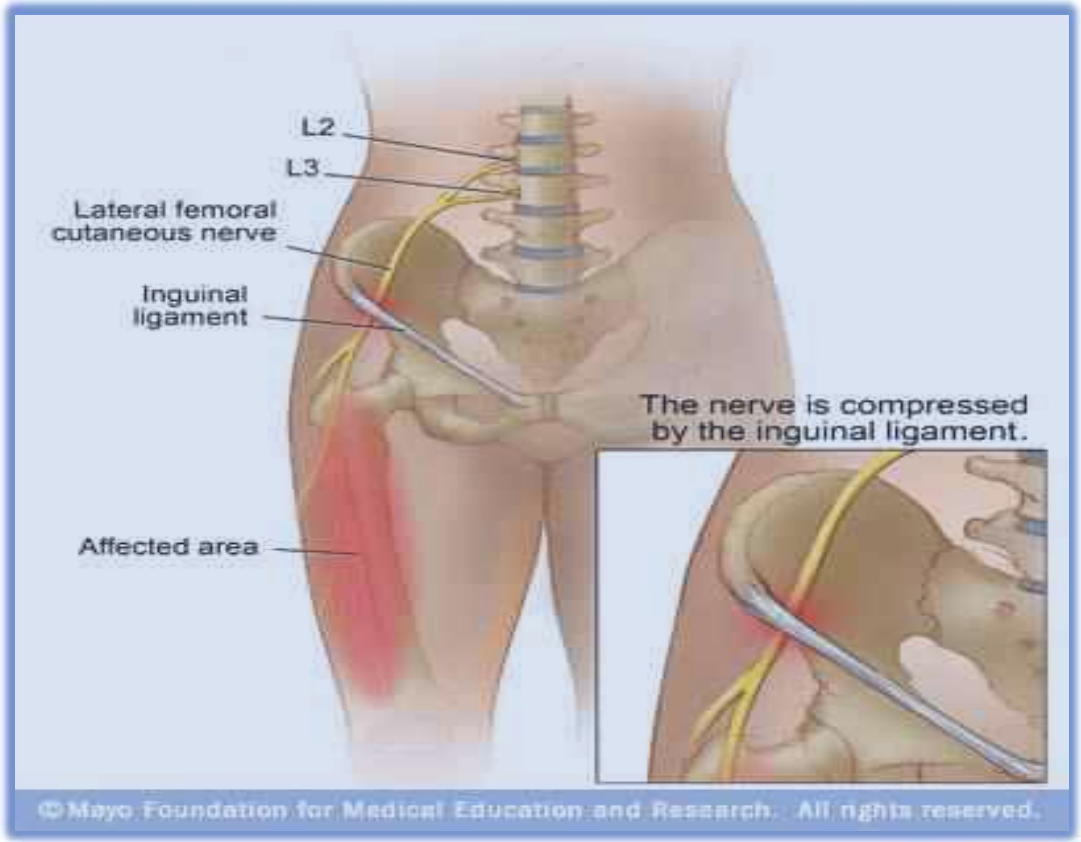
meralgia paraesthetica



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Posterior hip pain

- Least common pain pattern
- Usually suggests a source outside the hip joint
- Typically referred
  - OA lumbar spine
  - spinal stenosis
  - Nerve root pain L3
  - sacroilitis
  - rarely, aortoiliac vascular occlusive disease
- Piriformis syndrome

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Diagnostic gems

1. They have lace up shoes (unless their wife dresses them) excludes hip pathology
2. Pain crosses the knee to foot excludes hip pathology
3. Pain just in buttock likely sacroiliac disease excludes hip pathology

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Medial pole hip arthritis

- Seems like hip arthritis pain but x-ray reported as minimal OA

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When to operate

- Does the patient want surgery?
- Have they exhausted conservative measures?
- Are their symptoms intrusive on their lifestyle?
  - Sleep, activities, mobility

- Are they fit enough for surgery?
  - End of bed test
    - Obesity
    - Breathless at rest, chest pain at rest
    - Poor healing potential
      - steriods, uncontrolled DM, skin ulcers, PVD, etc

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When to operate

- Oxford hip and knee scores are not measures of arthritis

  - 1996 and 1998 introduced
  - patient-reported outcomes in orthopaedics
  - developed to assess the outcome of hip and knee replacements in randomised trials
  - designed to be completed by the patient in order to minimise potential bias unwittingly introduced by surgeons when assessing the results themselves.

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Other treatments

- Barbotage
  - US guided for psoas tendinopathy and glut medius
- Steriod injection
  - Hip (as a diagnostic tool)
  - Lateral hip (upto three then surgery)
- Chronic pain management

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Post op hip

- Leg swelling reduces 3-6 months
- Red/warm wounds






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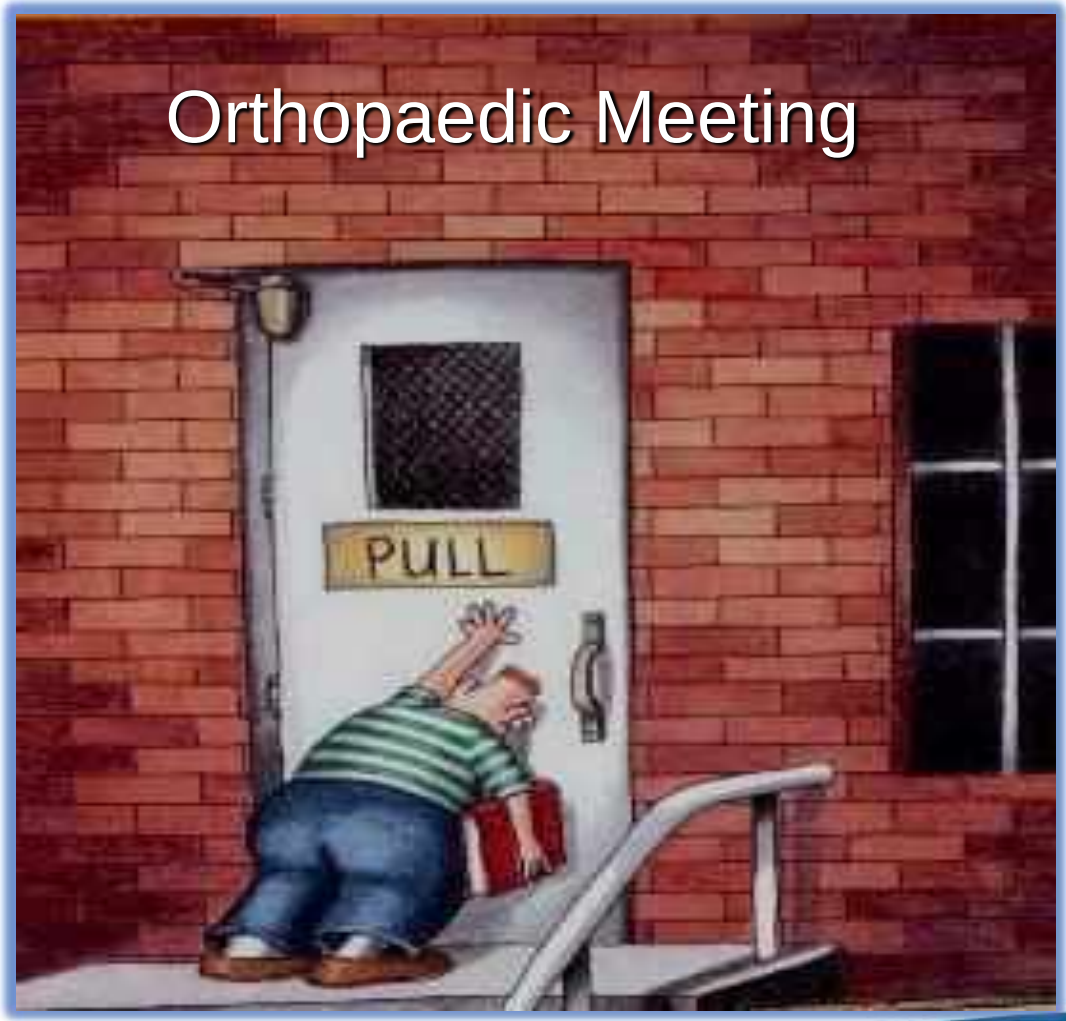
Orthopaedic Meeting



Ramsay Health Care

Shoulder and elbow problems in Primary Care - common conditions and their management

Mr Bibhas Roy

Shoulder/Elbow Problems in Primary Care – Common Conditions and their management

186

BIBHAS ROY
MANCHESTER UNIVERSITY FOUNDATION TRUST
EMAIL – BROY@SHOULDERSURGERY.INFO
WWW.SHOULDERSURGERY.INFO

Topics

- Examination of the shoulder/Elbow/wrist
  - Criteria for acute referral
  - Common conditions
  - Diagnosing OA
- Investigations in General Practice:
  - X-ray
  - USS
  - MRI scan
- Local pathway development
- When to refer to Orthopaedics

Diagnosis - Common

Shoulder pain

- Instability
- Rotator Cuff problems
- Long head of Biceps problems
- Frozen shoulder
- Arthritis
- ~~Impingement~~

Abdominal Pain

- Abdominal aortic aneurysm
- Appendicitis
- Cholangitis (bile duct inflammation)
- Cholecystitis
- Cystitis (bladder inflammation)
- Diabetic ketoacidosis
- Diverticulitis
- Duodenitis (inflammation in the first part of the small intestine)
- Ectopic pregnancy (in which the fertilized egg implants and grows outside of the uterus, such as in a fallopian tube)
- Fecal impaction (hardened stool that can't be eliminated)
- Heart attack
- Injury
- Intestinal obstruction
- Intussusception (in children)
- Kidney infection (pyelonephritis)
- Kidney stones
- Liver abscess (pus-filled pocket in the liver)
- Mesenteric ischemia (decreased blood flow to the intestines)
- Mesenteric lymphadenitis (swollen lymph nodes in the folds of membrane that hold the abdominal organs in place)
- Mesenteric thrombosis (blood clot in a vein carrying blood away from your intestines)
- Pancreatitis (pancreas inflammation)

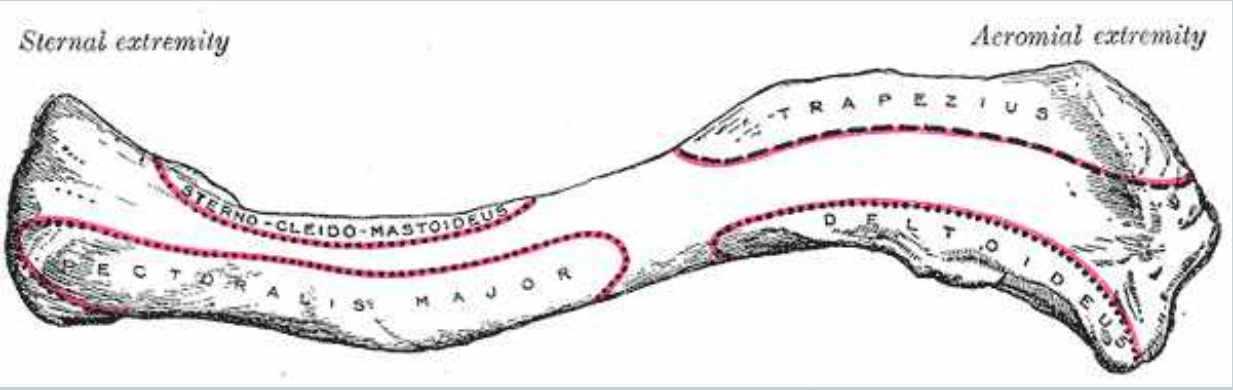
How to diagnose

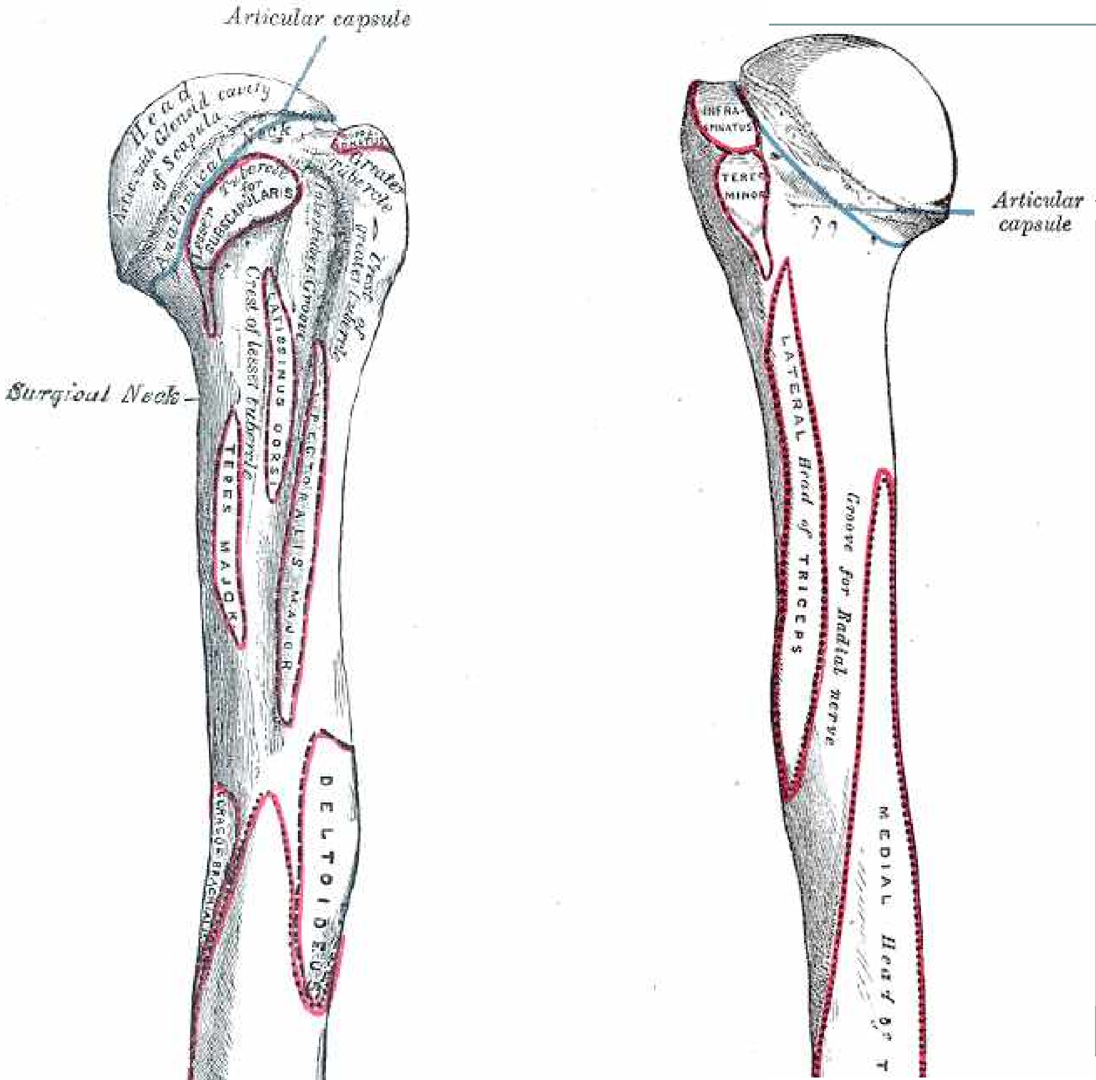
Listen	Look/feel /move
• Age • Work • Activities	• LHB – does it hurt • Elevate • Abduct • External Rotate

Anatomy

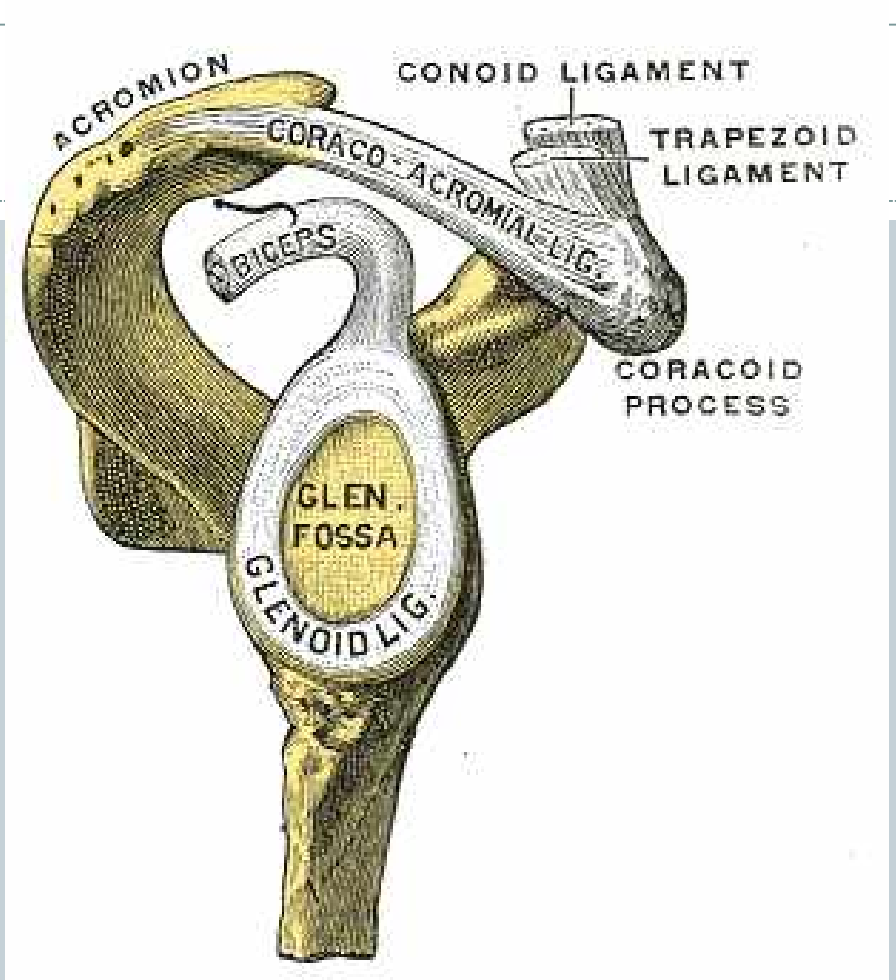
- Bones
- Ligaments
- Muscles
- Nerves

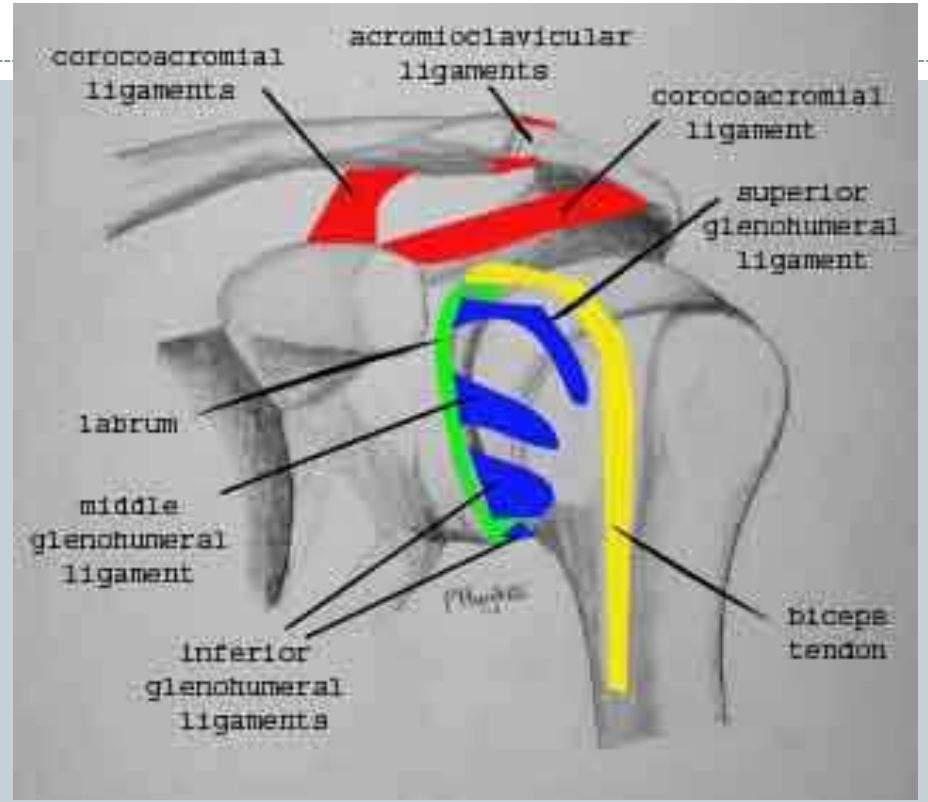
Clavicle

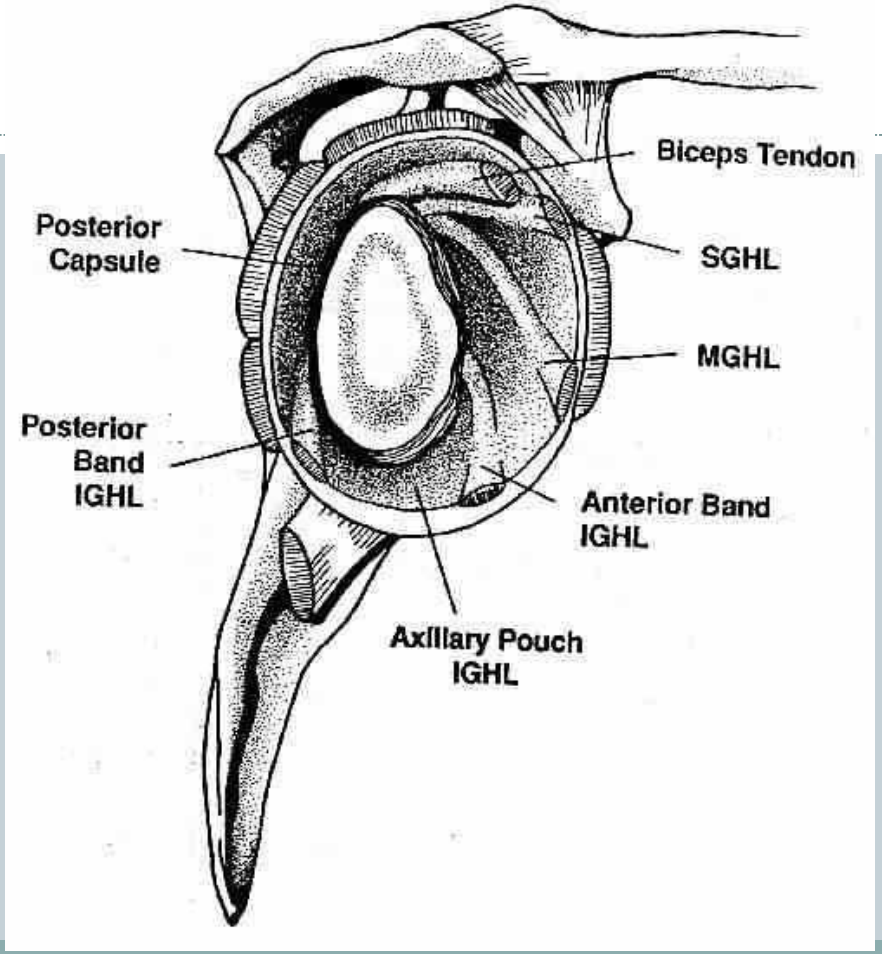

Sternal extremity
Acromial extremity
STERNO-CLEIDO-MASTOIDEUS
TRAPEZIUS
PECTORALIS MAJOR
DELTOIDEUS

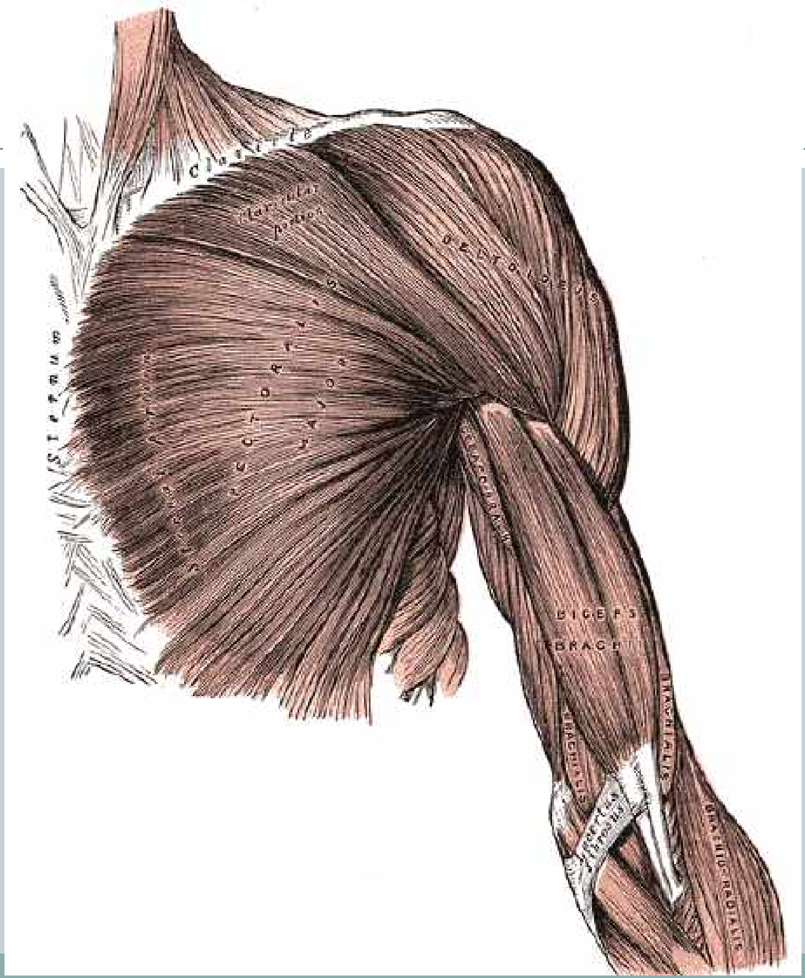


Articular capsule
Head
Surgical Neck
TERES MAJOR
LATISSIMUS DORSI
PECTORALIS MAJOR
DELTOIDEUS
INFRA-SPINATUS
TERES MINOR
LATERAL Head of TRICEPS
Groove for Radial nerve
MEDIAL Head of T
Articular capsule

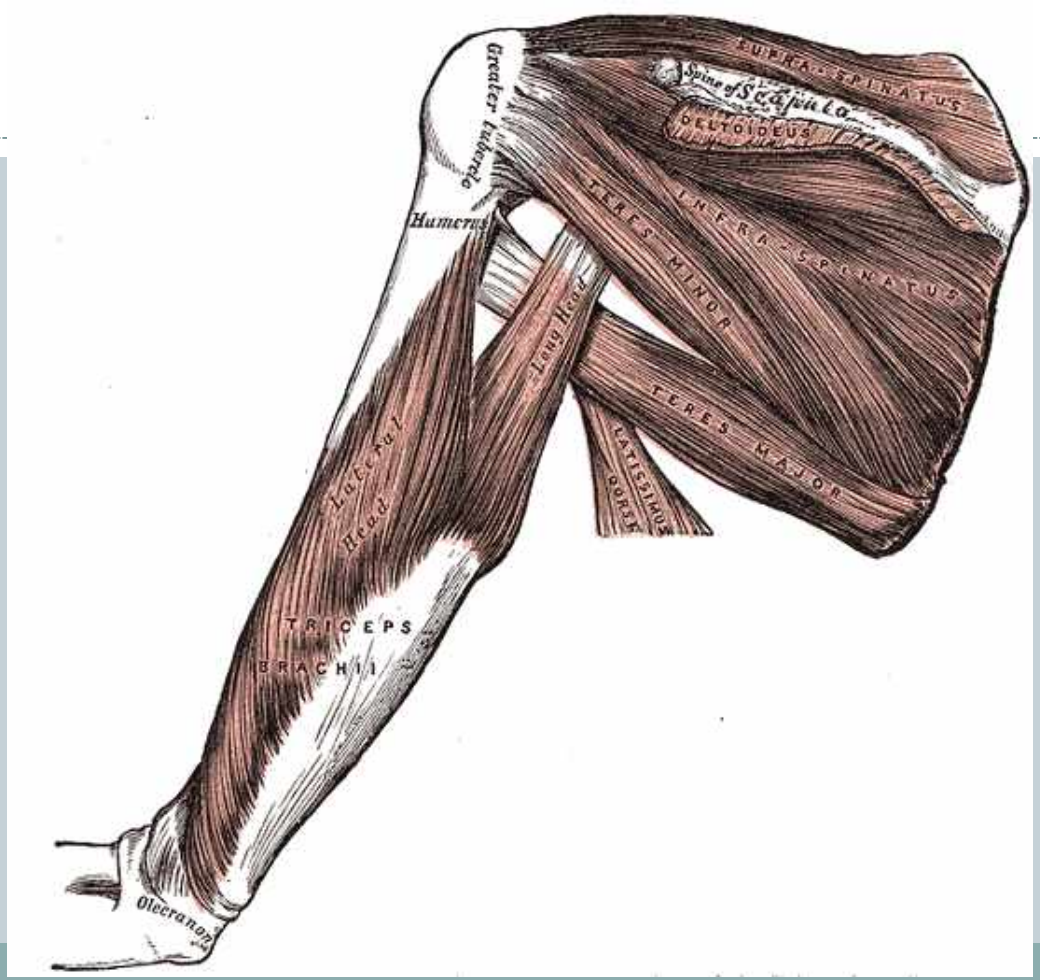

ACROMION
CONOID LIGAMENT
CORACO - ACROMIAL LIG.
TRAPEZOID LIGAMENT
BICEPS
CORACOID PROCESS
GLEN. FOSSA
GLENOID LIG.

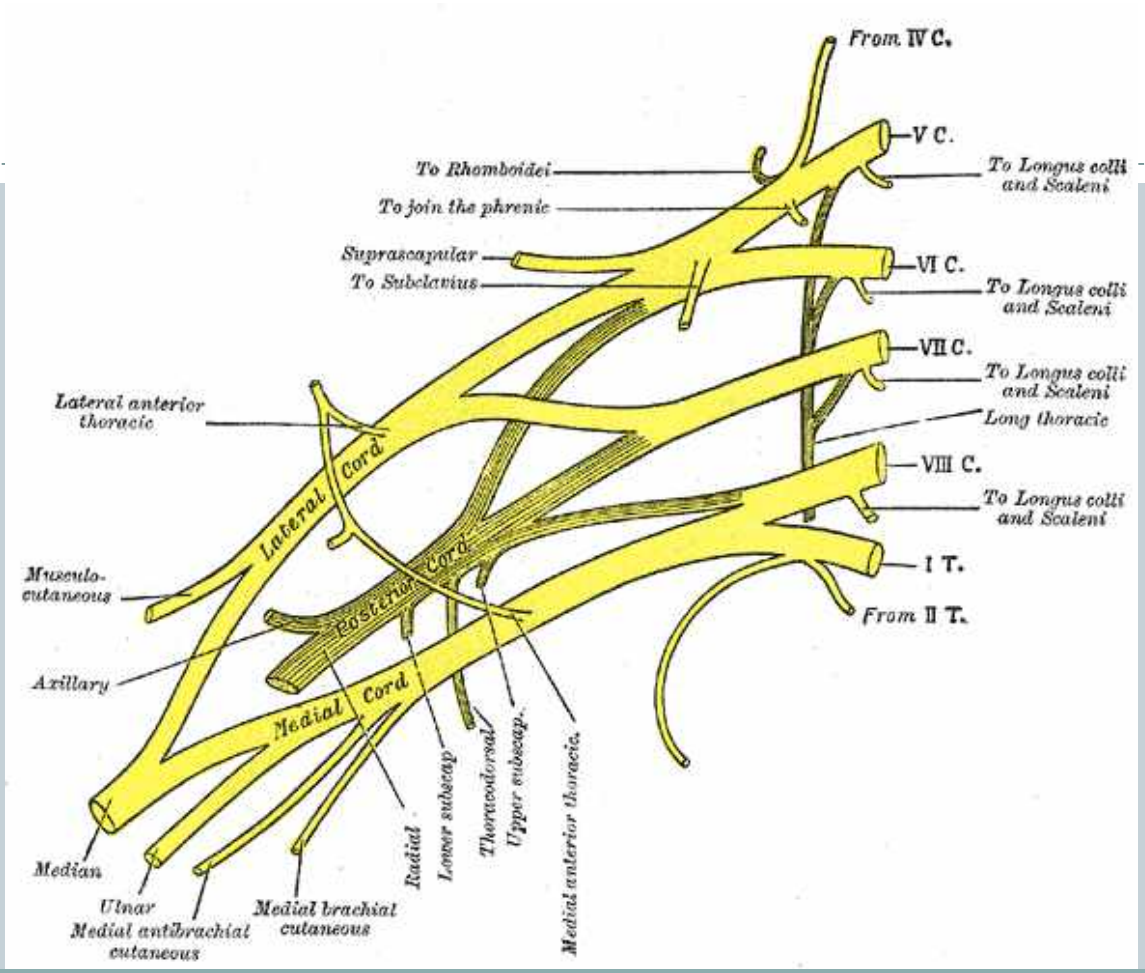

corocoacromial ligaments
acromioclavicular ligaments
corocoacromial ligament
superior glenohumeral ligament
labrum
middle glenohumeral ligament
inferior glenohumeral ligaments
bicepe tendon


Biceps Tendon
Posterior Capsule
SGHL
MGHL
Posterior Band IGHL
Anterior Band IGHL
Axillary Pouch IGHL



Sternum


Greater tubercle
Humerus
SUPRA-SPINATUS
Spine of Scapula
DELTOIDEUS
TERES MINOR
INFRA-SPINATUS
Long Head
TERES MAJOR
LATISSIMUS DORSI
Lateral Head
TRICEPS BRACHII
Olecranon


From IV C.
V C.
To Rhomboidei
To join the phrenic
To Longus colli and Scaleni
Suprascapular
To Subclavius
VI C.
To Longus colli and Scaleni
VII C.
To Longus colli and Scaleni
Lateral anterior thoracic
Long thoracic
VIII C.
To Longus colli and Scaleni
Lateral Cord
Posterior Cord
I T.
From II T.
Musculo-cutaneous
Axillary
Medial Cord
Radial
Lower subscap.
Thoracodorsal
Upper subscap.
Medial anterior thoracic
Median
Ulnar
Medial antibrachial cutaneous
Medial brachial cutaneous

Examination

- Look, Feel, Move
- Range of Movements
  - Elevation
    - Forward flexion
    - Abduction
  - Rotation
    - External
    - Internal

Muscles and Nerves

- Deltoid
- Rotator Cuff
  - Supraspinatus
  - Infraspinatus
  - Subscapularis
  - Teres Minor

Special tests

Special tests

Investigate

- X ray

Investigate

- USS
- CT Scan
- MRI Scan
- Arthrograms

Diagnosis of Shoulder problems in Primary Care:

Guidelines on treatment and referral

Red Flags = Urgent Referral

1. Trauma, pain and weakness - ? Acute cuff tear
2. Any mass or swelling - ? Tumour
3. Skin sign, fever or systemically unwell - ? Infection
4. Trauma / epileptic fit / electric shock leading to loss of reduction and abnormal shape - ? Unreduced Dislocation

Is it Neck or Shoulder ?

- Ask the patient to first move the neck and then move the shoulder.
- Which reproduces the pain?

Neck

- Follow local spinal referral guidelines

Shoulder

History of Instability?

- Does the shoulder ever pop or completely come out of joint?
- Is your patient aware that their shoulder may dislocate during sport or activities?

Yes → Primary Care: Instability (Common age 13 - 30 yrs; - Physio & Rehabilitation) → **Refer** → Refer to Shoulder Clinic: Instability

- Traumatic dislocation
- Ongoing symptoms
- Accountable with facial physio

No

- Is the pain localised to the AC joint and associated with tenderness?
- Is there high arc pain
- Is there a positive cross arm test

Yes → Primary Care: Acromioclavicular Joint Disease (Common age >30 yrs; - Rest/NSAIDS/analgesics; - Steroid injection; - Physio; - Avoid / do not overhead) → **Refer** → Refer to Shoulder Clinic: Acromioclavicular Joint Disease

- Refer if persistent or no response to injection and physio

No

- Is there reduced passive external rotation?

Yes → Primary Care: Glenohumeral Joint (If frozen shoulder; Common age mid years; Arthritis; Common age mid years; - X-ray - to differentiate; - Rest; - NSAIDs/analgesics; - Steroid injection; - Corticosteroid injection) → **Refer** → Refer to Shoulder Clinic: Glenohumeral Joint

- If frozen shoulder with normal x-ray – refer if atypical and/or severe functional limitation
- Refer if arthritis on x-ray and poor response to analgesics and injection.

No

- Is there a painful arc of abduction?
- Is there pain on abduction with the thumb down, worse against resistance?

n.b. A history of trauma and pain on abduction in a younger patient – see also

Yes → Primary Care: Rotator Cuff Tendinopathy (Common age 30-70 years; - Rest / NSAIDS / analgesics; - Subacromial injection; - Physiotherapy; n.b. Although an acute/sub-acute tear can be of any age, 20% of people over 60 years have asymptomatic cuff tears.) → **Refer** → Refer to Shoulder Clinic: Rotator Cuff Tendinopathy

- Transient or no response to injection and physiotherapy

n.b. Isolated subscapularis tears in patients < 70 years are generally not repairable.

No

Other cause of Neck or Arm pain

The Oxford Shoulder Clinic at the Nuffield Orthopaedic Centre

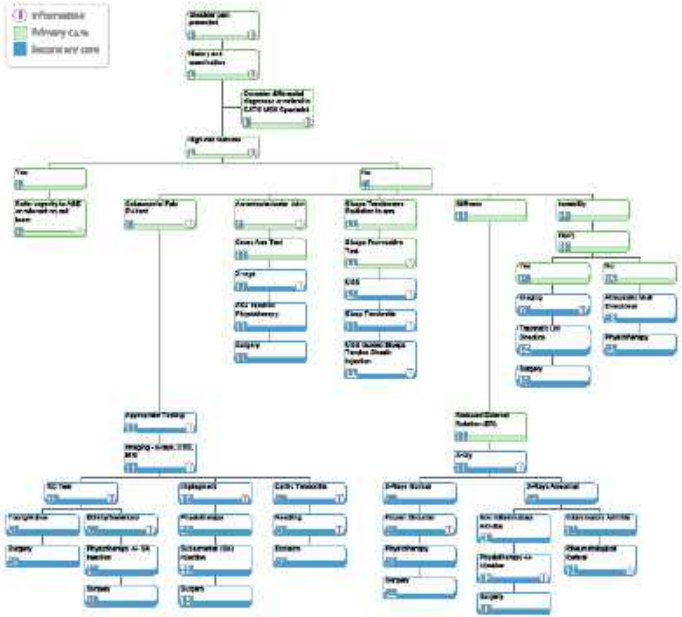
(see – www.nuoc.ndcs.ox.ac.uk/shoulder/patient/fellow - for patient information booklets)

Shoulder Pain (Mar11)

Trafford LHC - Pathways in Development - Orthopaedics - Shoulder Pain

map of medicine

Institute for Innovation and Improvement NHS



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This pathway was published by . A printed version of this document is not controlled so may not be up-to-date with the latest clinical information.

When to refer?

- Red Flags –
- Trauma – fractures, cuff tears, instability
- When non operative measures have failed
  - Arthritis
  - ACJ problems
  - Biceps problems
- Cuff tears
  - Ensure surgery is NOT appropriate

Injections

- Material – Steroid, Hyaluronic acid, PRP
- Route
  - **Gleno-humeral injection –**
    - inflammatory arthritis such as rheumatoid arthritis.
    - Less useful for osteoarthritis as this is a degenerative condition.
    - frozen shoulders but there is controversy about this.
    - Anterior or posterior routes can be used.
  - **Subacromial injections –**
    - impingement syndrome - the commonest shoulder disorder.
    - Rotator cuff tears should be excluded before the injections.
    - The accuracy in expert hands is about 75%.
    - USS guidance improves accuracy.
  - **Acromio-clavicular injections –**
    - Useful for degenerate conditions of the AC joint.
    - Can be repeated as the only other treatment is often surgical excision.
    - Again USS improves accuracy.
  - **Biceps sheath injections –**
    - for the specific diagnosis of biceps tendonitis. USS guidance is essential to avoid intratendinous injections and localise to the sheath.

The Lancet, Volume 376, Issue 9754, Pages 1751 - 1767, 20 November 2010

Efficacy and safety of corticosteroid injections and other injections for management of tendinopathy: a systematic review of randomised controlled trials

- 3824 trials were identified
- Short term benefit

Elbow – common problems

- Tendinoses/ Tendinopathy
  - Flexor
  - Extensor
- Olecranon bursitis
- Neural entrapments
  - Ulnar
  - Median
- Injuries
  - Fractures/dislocations
  - Distal biceps rupture

Tennis Elbow

- Doing nothing is better than steroid injection!

Mobilisation with movement and exercise, corticosteroid injection, or wait and see for tennis elbow: randomised trial - Leanne Bisset, PhD candidate, Elaine Beller, director of biostatistics, Gwendolen Jull, professor, Peter Brooks, executive dean4, Ross Darnell, statistician3, Bill Vicenzino, associate professor -
***BMJ* 2006;333:939 (4 November),**

Platelet Rich Plasma

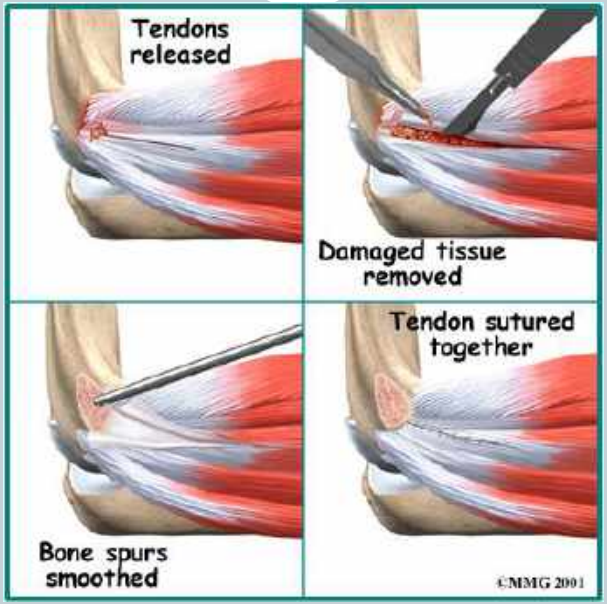
Platelet-rich plasma (PRP) is promoted as an ideal autologous biological blood-derived product that can be exogenously applied to various tissues, where it releases high concentrations of platelet-derived growth factors that enhance wound healing, bone healing, and tendon healing

- Minimal risk of complications
- Used before surgery, so should replace surgery in many patients

Positive Effect of an Autologous Platelet Concentrate in Lateral Epicondylitis in a Double-Blind Randomized Controlled Trial Platelet-Rich Plasma Versus Corticosteroid Injection With a 1-Year Follow-up

Joost C. Peerbooms, MD*, Jordi Sluimer, MD†, Daniël J. Bruijn, PhD* andTaco Gosens, PhD†‡

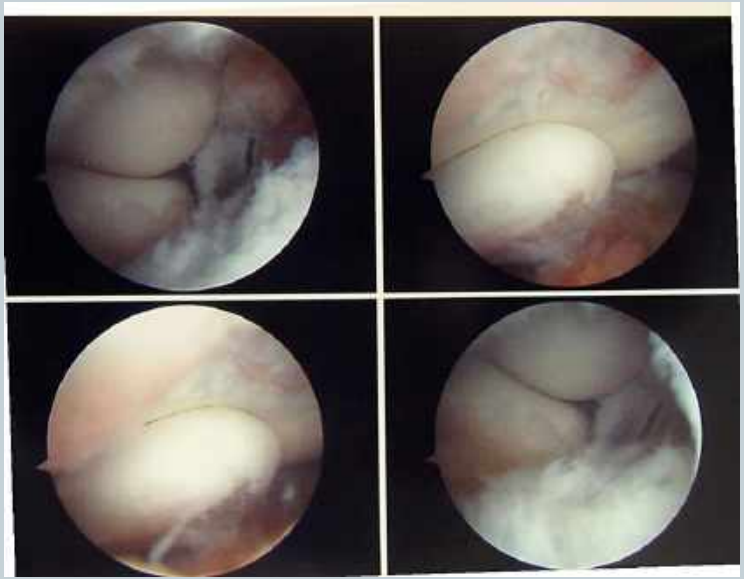
Surgery


Tendons released
Damaged tissue removed
Bone spurs smoothed
Tendon sutured together
©MMG 2001

Open Tennis Elbow release

Tennis Elbow

- Arthroscopy & release



Summary

- Competent examination for common conditions
- When to refer
- When to image
- When to inject – and what to use?
- When do we need hospital care?

broy@shouldersurgery.info

Knee pain in modern times

Mr Neil Jain

Knee Pain in Modern Life

Speaker: Mr Neil Jain BM, MRCS Ed, FRCS Tr & Orth, IOC Dip Sp Phys

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Introduction

- Knee Pain

  - Traditional concepts / thoughts
  - Knee Anatomy
  - Knee History
  - Knee Cases
  - Joint Preservation
  - Modern Treatments

Traditional Knee Pain

Traditional Treatment

- Analgesia
- Steroid Injection
- Arthroscopy
- Knee Replacement

Traditional Treatment

- Analgesia
- Steroid Injection
- Arthroscopy
- Knee Replacement

- Is there more to it?

Pain History

- S –
- T –
- R –
- I –
- D –
- O –
- R –
- A –
- P –

Pain History

- S – Site
- T – Type
- R – Radiating
- I – Intensity
- D – Duration
- O – Onset (was there an injury?)
- R – Relieving Factors
- A – Aggravating Factors
- P –Previous pains / injuries

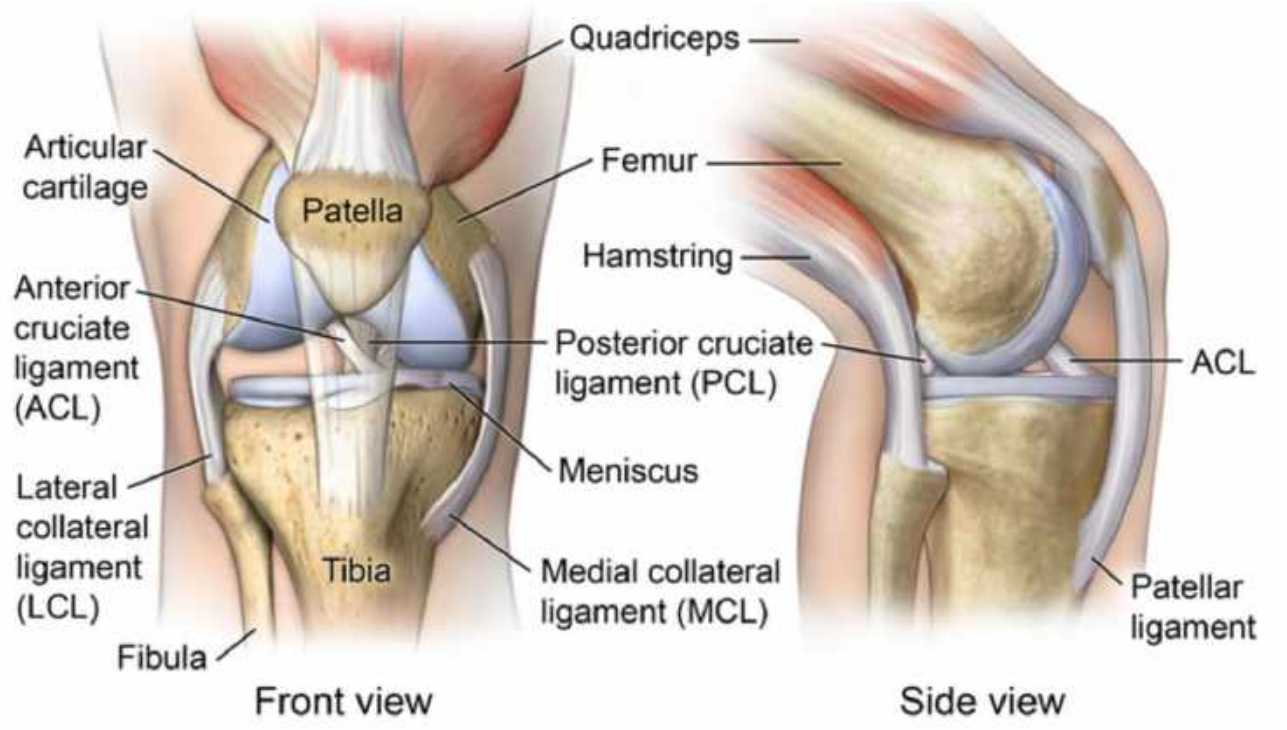
Pain History

- **S – Site**
- T – Type
- R – Radiating
- I – Intensity
- D – Duration
- **O – Onset (was there an injury?)**
- R – Relieving Factors
- **A – Aggravating Factors**
- P –Previous pains / injuries

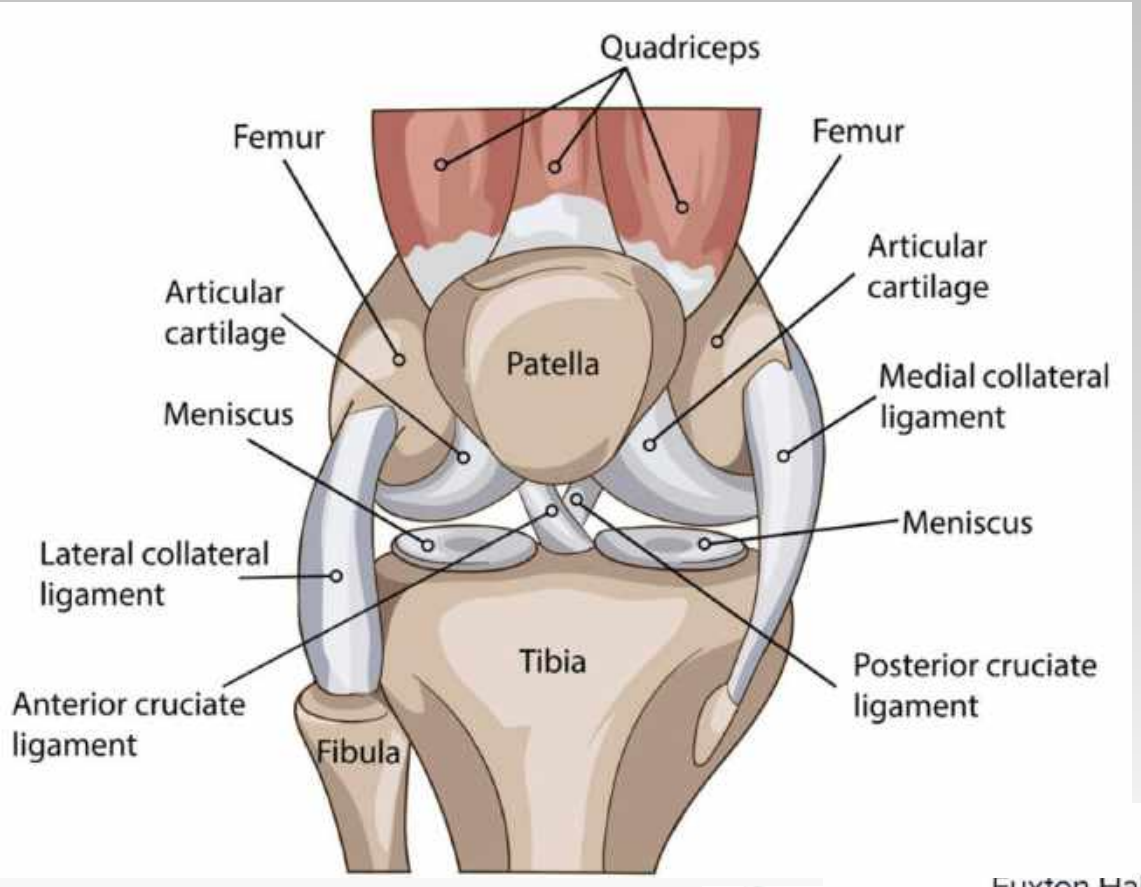
Knee History Additions:

- Mechanical Symptoms
  - Locking
    - NOT Stiffness
  - Giving way
- Age
- Treatment so Far

Knee Anatomy



Knee Anatomy – Medial Pain



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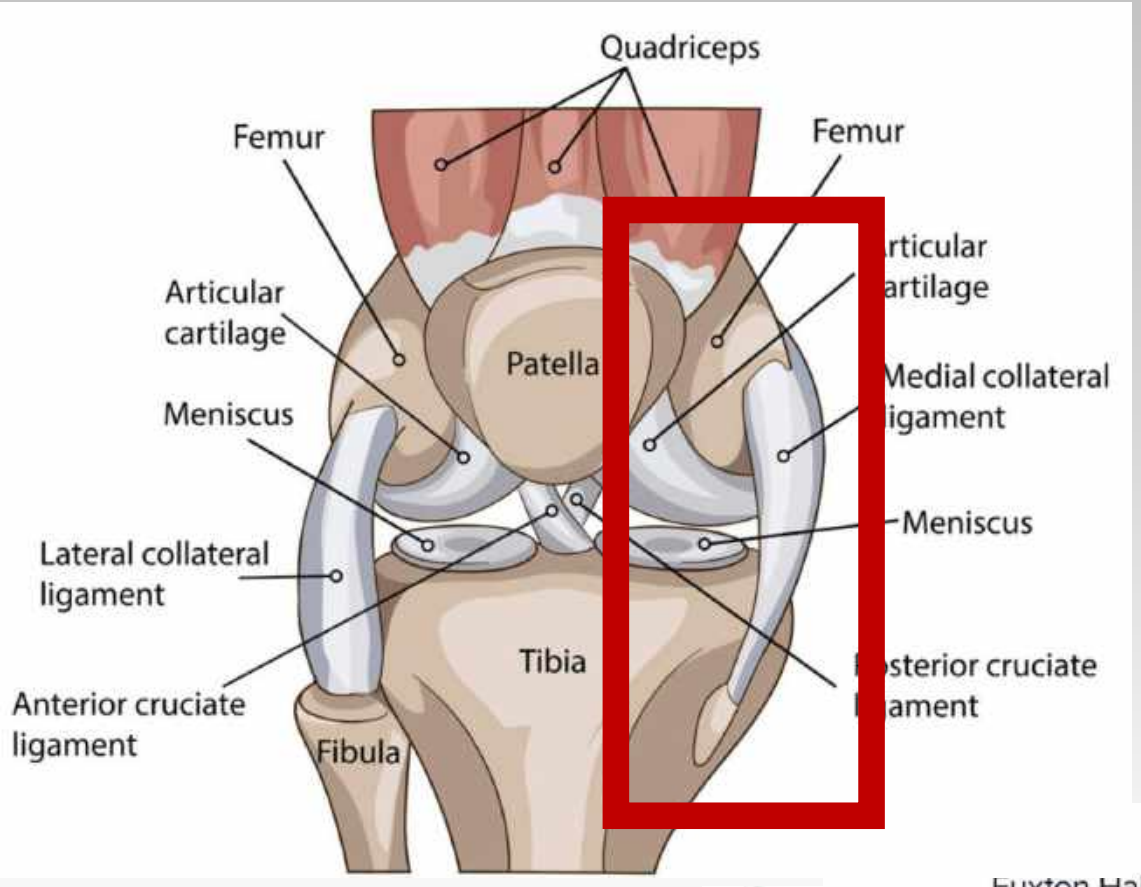
Knee Anatomy – Medial Pain



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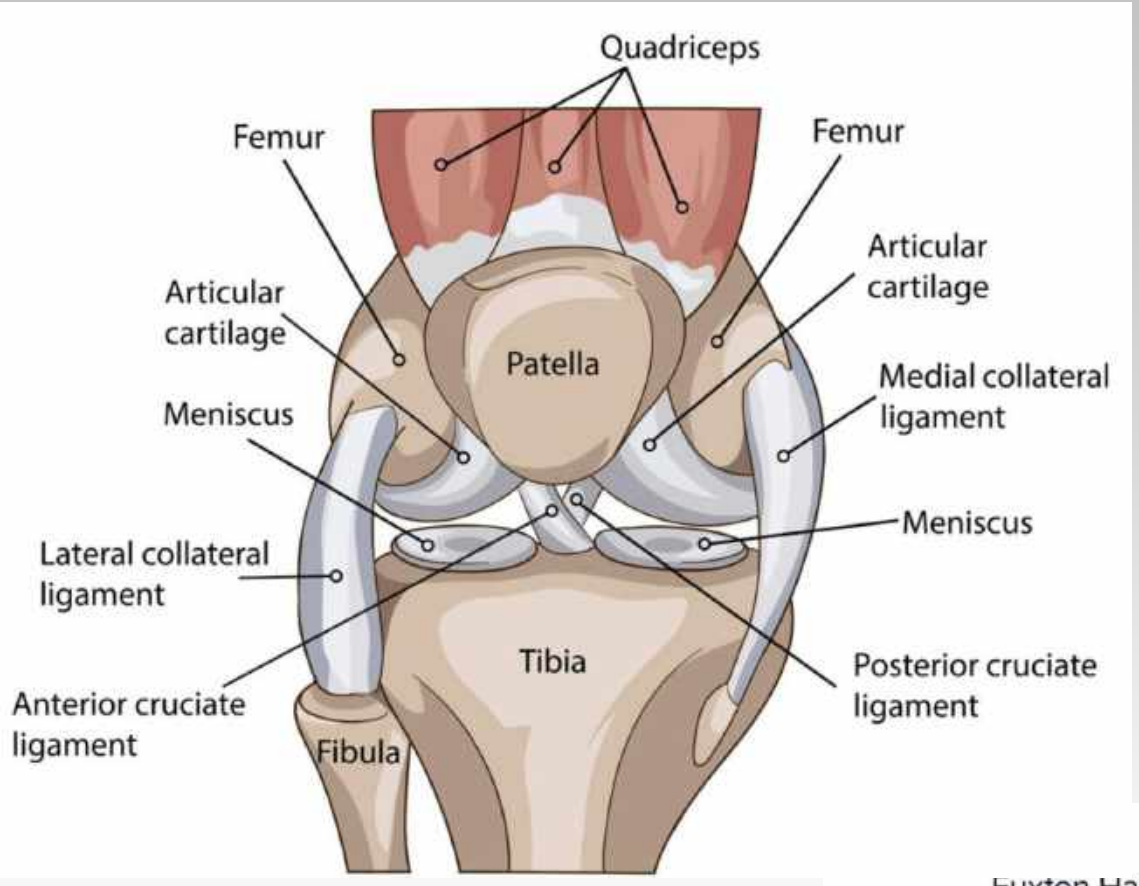
Knee Anatomy – Lateral Pain



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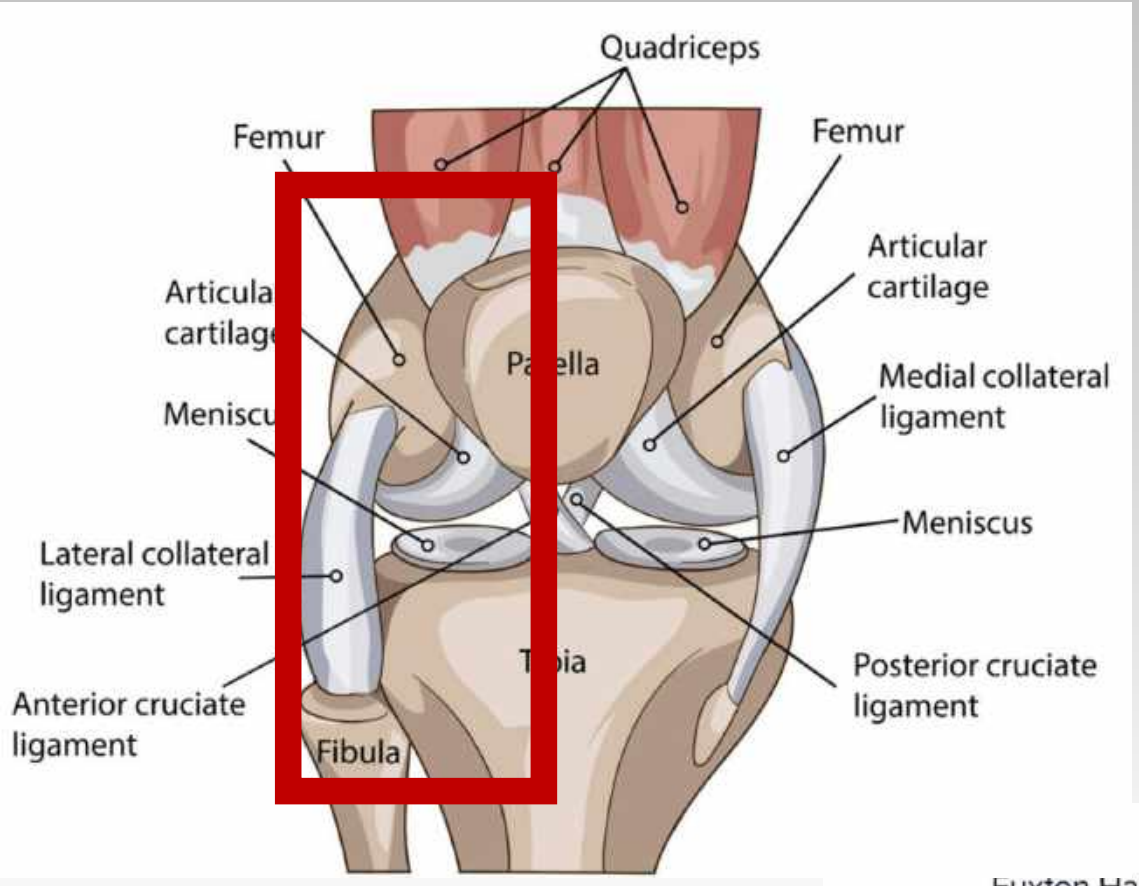
Knee Anatomy – Lateral Pain



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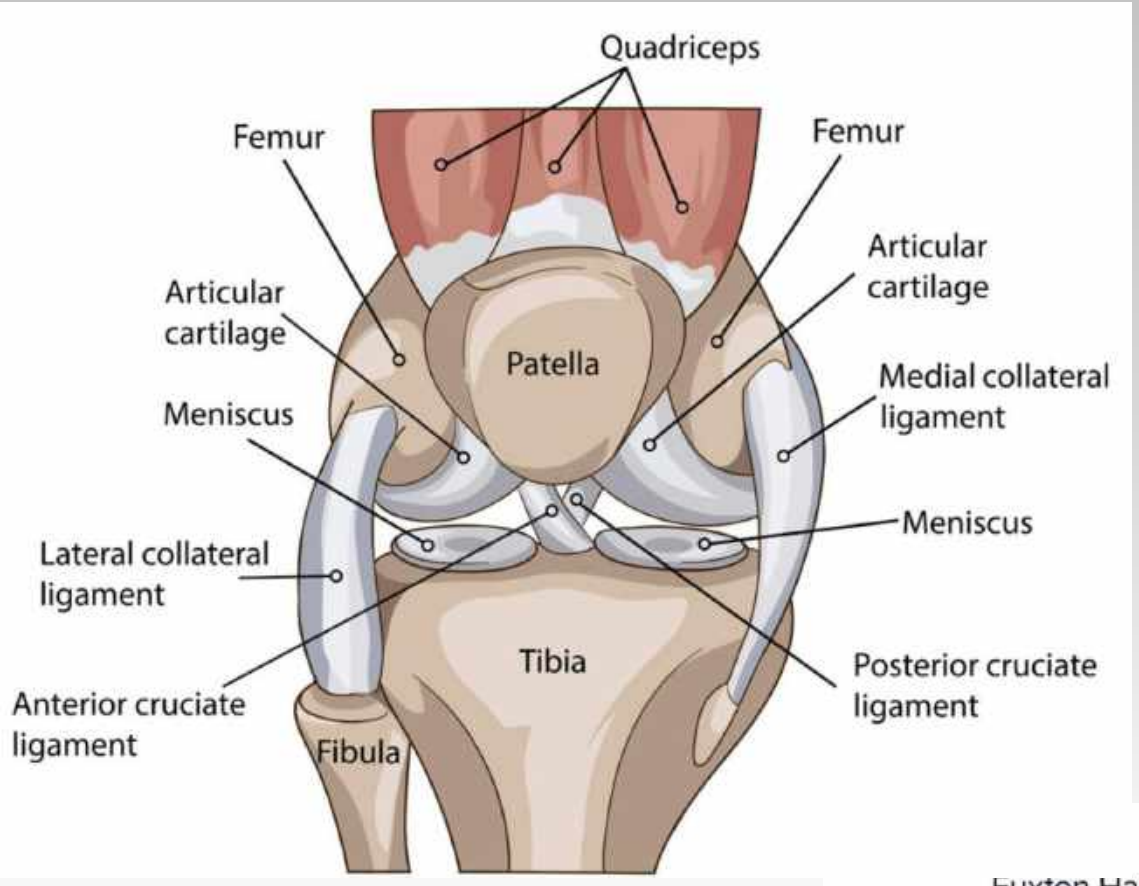
Knee Anatomy – Central Pain



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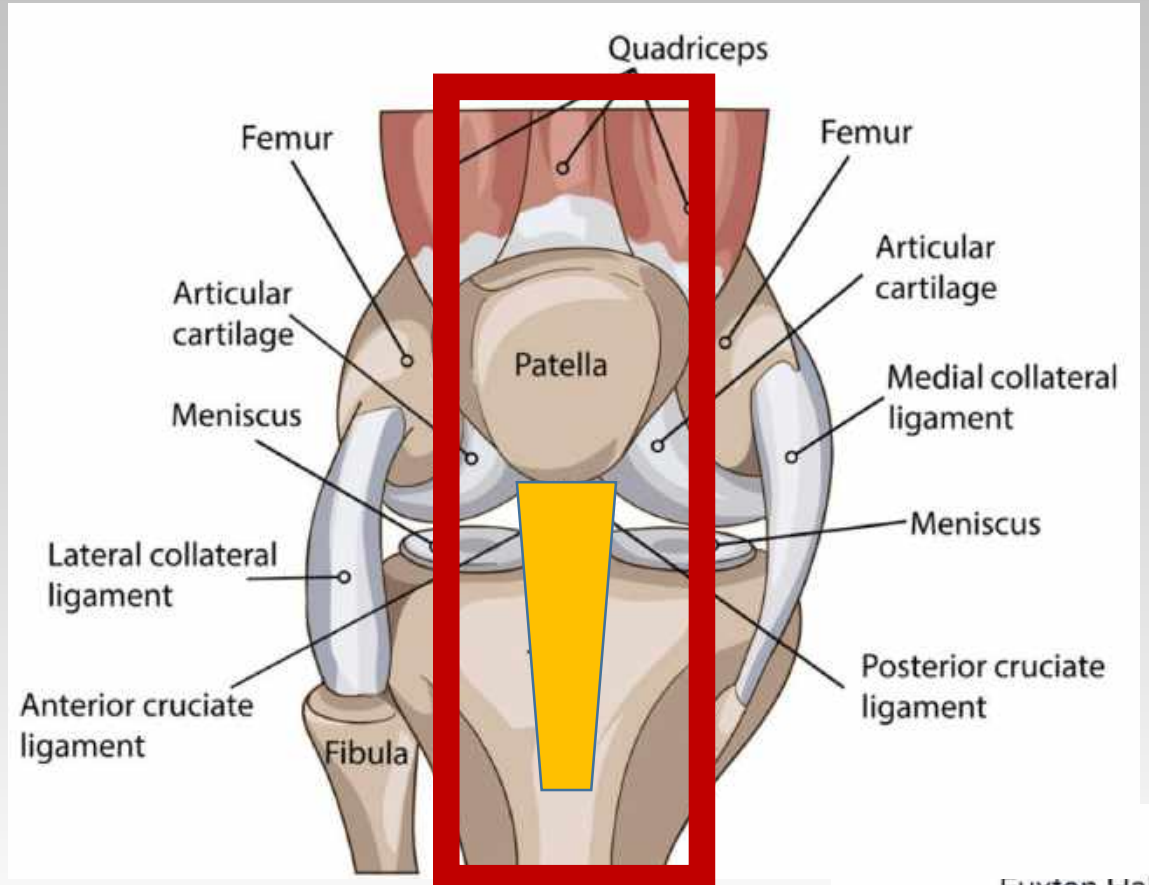
Knee Anatomy – Central Pain



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Cases

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History #1 – 42-year-old male

• S – Site	• Medial
• T – Type	• Acute
• R – Radiating	• None
• I – Intensity	• Moderate to Severe
• D – Duration	• Weeks
• O – Onset (was there an injury?)	• Yes, twist
• R – Relieving Factors	• None
• A – Aggravating Factors	• Twisting
• P –Previous pains / injuries	• No

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History #1 - 42-year-old male

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• T – Type	• Acute
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+ Locking
+ Pseudo Instability

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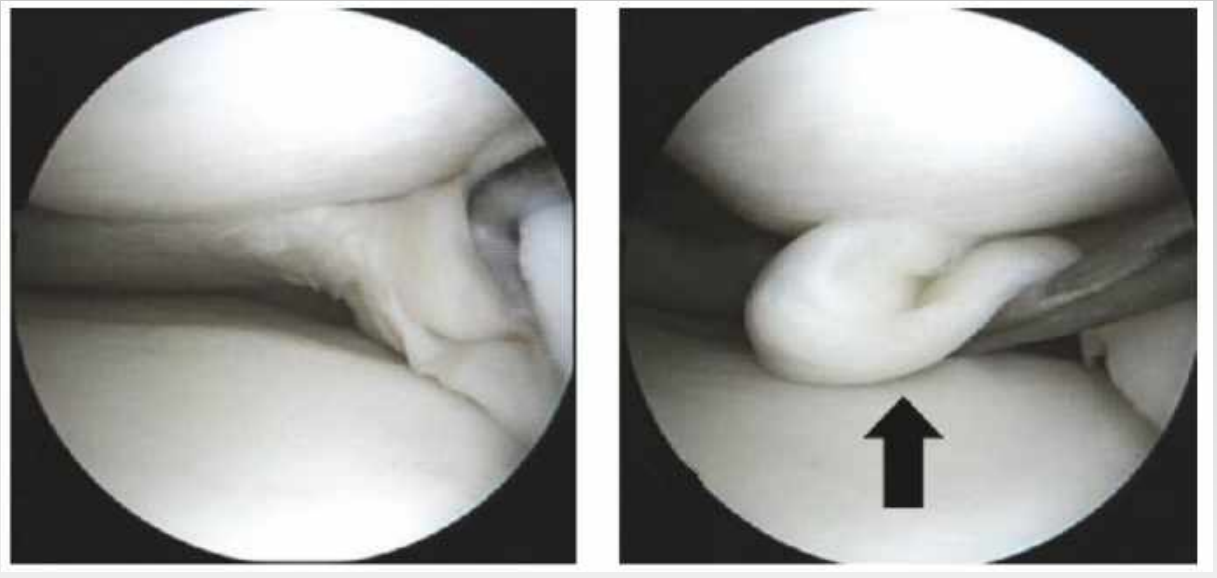
Medial Meniscus Tear



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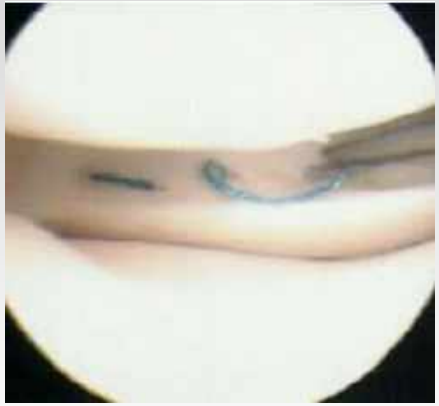
Medial Meniscus Tear - Treatment

- ESSKA Guidelines
- Over 35 years
  - Degenerative
  - 4-month Trial of Physio / Non – Op



- ANY Age
  - Traumatic
  - Surgery
  - SAVE THE MENISCUS!

save the meniscus
some things are better left intact

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History #2 – 72-year-old female

- S – Site
- T – Type
- R – Radiating
- I – Intensity
- D – Duration
- O – Onset (was there an injury?)
- R – Relieving Factors
- A – Aggravating Factors
- P –Previous pains / injuries

- Lateral
- Chronic
- None
- Moderate
- Years
- Gradual (No)
- Rest
- Exercise
- Arthroscopy 15 years ago

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History #2 – 72-year-old female

- S – Site
- T – Type
- R – Radiating
- I – Intensity
- D – Duration
- O – Onset (was there an injury?)
- R – Relieving Factors
- A – Aggravating Factors
- P –Previous pains / injuries

- Lateral
- Chronic
- None
- Moderate
- Years
- Gradual (No)
- Rest
- Exercise
- Arthroscopy 15 years ago

No Locking
+ Pseudo Instability

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Lateral Compartment Osteoarthritis

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Lateral Compartment Osteoarthritis - Treatment

- Analgesia
- Steroid
- Arthroscopy
- TKR

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Lateral Compartment Osteoarthritis - Treatment

- Analgesia
- Steroid
- Arthroscopy
- TKR

vs

Joint Preservation

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History #3 – 18-year-old female

- S – Site
- T – Type
- R – Radiating
- I – Intensity
- D – Duration
- O – Onset (was there an injury?)
- R – Relieving Factors
- A – Aggravating Factors
- P –Previous pains / injuries

- Lateral
- Acute
- None
- Severe
- Days
- Sudden (Yes)
- None
- Weight Bearing
- None

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History #3 – 18-year-old female

- S – Site
- T – Type
- R – Radiating
- I – Intensity
- D – Duration
- O – Onset (was there an injury?)
- R – Relieving Factors
- A – Aggravating Factors
- P –Previous pains / injuries

- Lateral
- Acute
- None
- Severe
- Days
- Sudden (Yes)
- None
- Weight Bearing
- None

No Locking
+++ Instability
+++ Swelling

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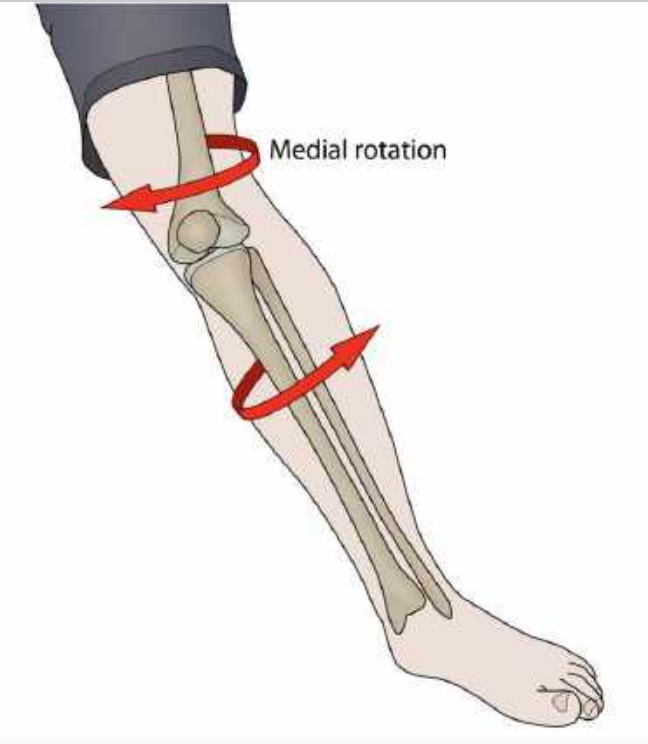
Anterior Cruciate Ligament Tear



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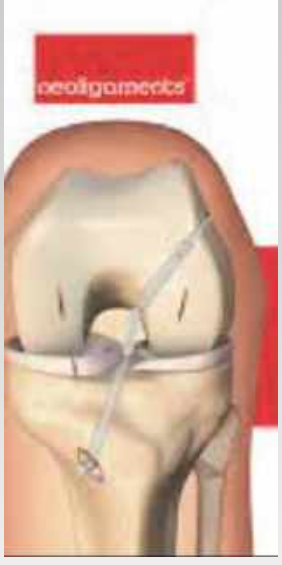
ACL Tear - Treatment

- 1/3 – No Problem
- 1/3 – Ok ADL : Can’t do sports
- 1/3 – Can’t do ADL

- Argument for protection of cartilage



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History #4 – 32-year-old Male

- S – Site
- T – Type
- R – Radiating
- I – Intensity
- D – Duration
- O – Onset (was there an injury?)
- R – Relieving Factors
- A – Aggravating Factors
- P –Previous pains / injuries

- Central
- Chronic
- None
- Moderate
- Months
- Gradual (No)
- Rest
- Stairs, Squatting
- None

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History #4 – 32-year-old Male

- S – Site
- T – Type
- R – Radiating
- I – Intensity
- D – Duration
- O – Onset (was there an injury?)
- R – Relieving Factors
- A – Aggravating Factors
- P –Previous pains / injuries

- Central
- Chronic
- None
- Moderate
- Months
- Gradual (No)
- Rest
- Stairs, Squatting
- None

No Locking
No Instability

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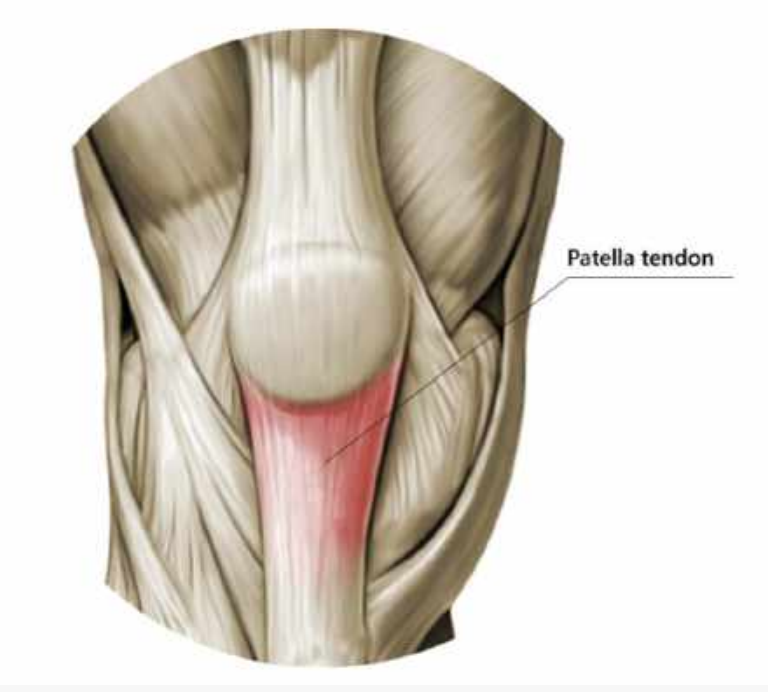
Patellar Tendinopathy



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Patellar Tendinopathy - Treatment

- Physio
  - Eccentric Quads
  - Isometric Quads
- Appropriate Loading
- Dry Needling
- Injection
- Surgery

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History #5 – 30-year-old male

• S – Site	• Medial
• T – Type	• Acute
• R – Radiating	• None
• I – Intensity	• Moderate to Severe
• D – Duration	• Days
• O – Onset (was there an injury?)	• Yes, impact
• R – Relieving Factors	• None
• A – Aggravating Factors	• Twisting
• P –Previous pains / injuries	• No

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History #5 – 30-year-old male

- S – Site
- T – Type
- R – Radiating
- I – Intensity
- D – Duration
- O – Onset (was there an injury?)
- R – Relieving Factors
- A – Aggravating Factors
- P –Previous pains / injuries

- Medial
- Acute
- None
- Moderate to Severe
- Days
- Yes, impact
- None
- Twisting
- No

No Locking
++ Instability
++ Swelling

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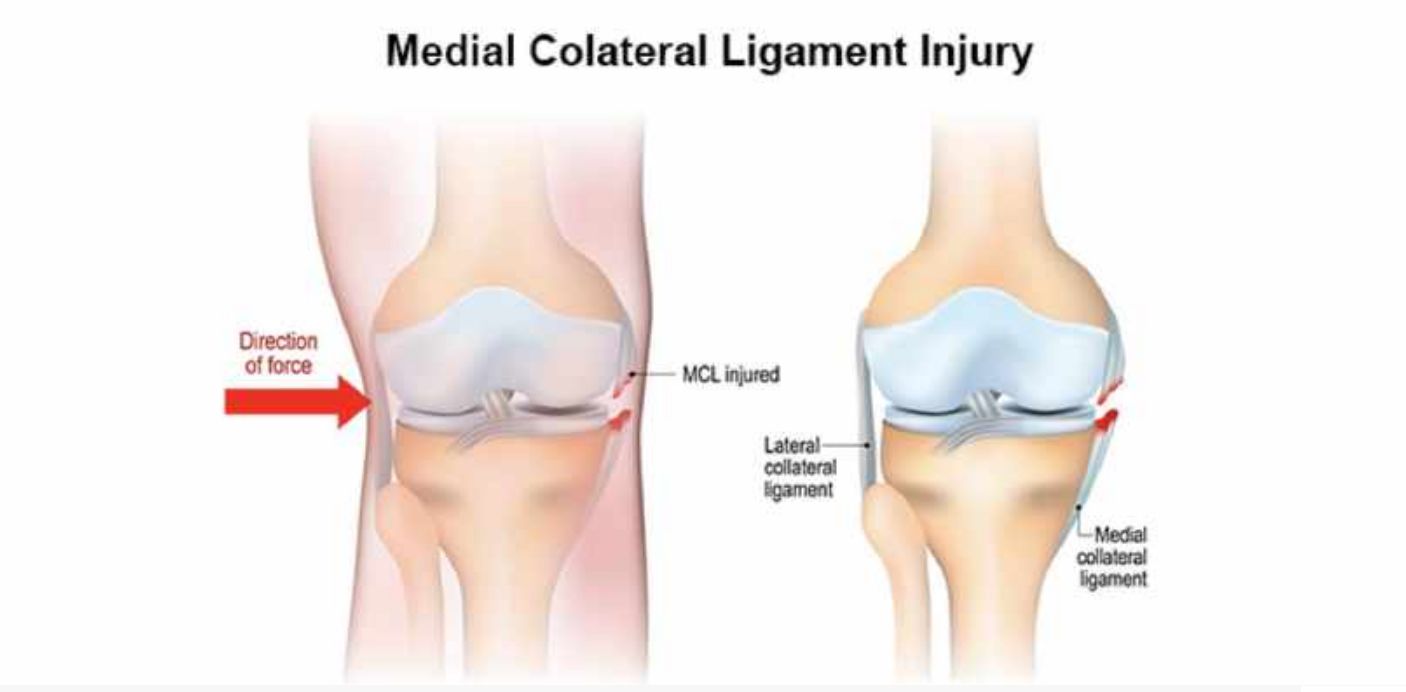
Medial Collateral Ligament Tear



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MCL Tear - Treatment

- Depends on Grade
- I & II
  - Non-Op
  - Brace
  - Physio
- III
  - Op

- NB- Consider co-existing injuries

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Joint Preservation

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Joint Preservation - What?

- Trying to preserve the native joint for as long as possible
- Exhausting the life span of a joint
- Delaying the need for surgical intervention (Arthroplasty) for as long as possible

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Joint Preservation - Why?

- The patient with OA is changing
  - ‘Elderly’ person is more active
  - Wants to stay active if possible
  - Mental Health /Wellbeing impact
- TKR Outcomes Variable
  - Up to 1/3 unhappy
- Avoid risk
  - Delay need for surgery if possible

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Modern Treatments for Joint Preservation

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Vitamin Supplementation

- Multi-Vitamin
- Glucosamine
- Chondroitin
- Cod Liver Oil
- Turmeric (with Black Pepper)

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Insoles

- Medial OA / Pain
  - Salford Insole

- Lateral OA / Pain
  - Plano-valgus Foot
  - Insoles to correct flat foot

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Knee Sleeves

- Generic

- Copperware

- Incrediwear

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Knee Braces

- RIGHT Brace for RIGHT problem
- Medial Unloader or Lateral Unloader

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Physiotherapy

- Correct alignment
- Increase muscle activation
- Create balance
- Maintain ROM

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Exercise Therapy

- Non-impact exercise
  - Cycling
  - Rowing
- Adjust running
  - Treadmill not fells
- ROM / Core
  - Yoga
  - Pilates
- Mental Health Benefit

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Injections

- Steroid vs Hyaluronic Acid vs Platelet Rich Plasma

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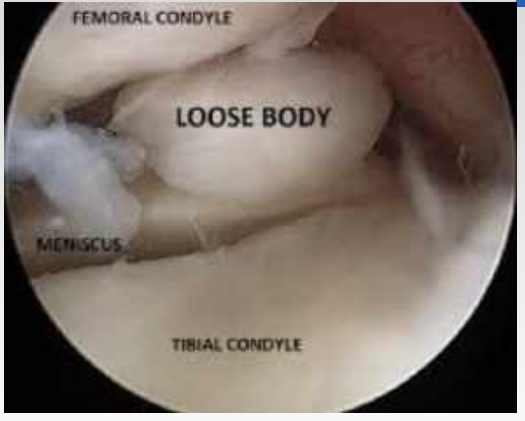
Arthroscopy

- Less common now
- Still an option if:
  - Mechanical symptoms
  - Loose bodies
  - Good previous experience
  - Thorough surgery
  - Attention to detail
  - Correct Rehab



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Summary – Let's make a Happy Knee

- Traditional thoughts are changing
- Simple Pain History can tell you a lot
- More treatment options than ever
- Concept of Joint Preservation
- Right option for right patient

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Thank you

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Thank you

- The British Orthopaedic Sports Trauma & Arthroscopy Association

www.bostaa.ac.uk

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