



# Welcome to White Rock Orthopaedic Surgery Centre

- ✓ *Excellence in Orthopaedic Surgery since 2008*
- ✓ *Over 700 surgical cases  
(spring of 2013)*

# Welcome to White Rock Orthopaedic Surgery Centre

✓ *Fully Accredited*



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✓ *Class-1 Facility*



# Welcome to White Rock Orthopaedic Surgery Centre

- ✓ Expedient initial assessment
- ✓ Secure, online registration



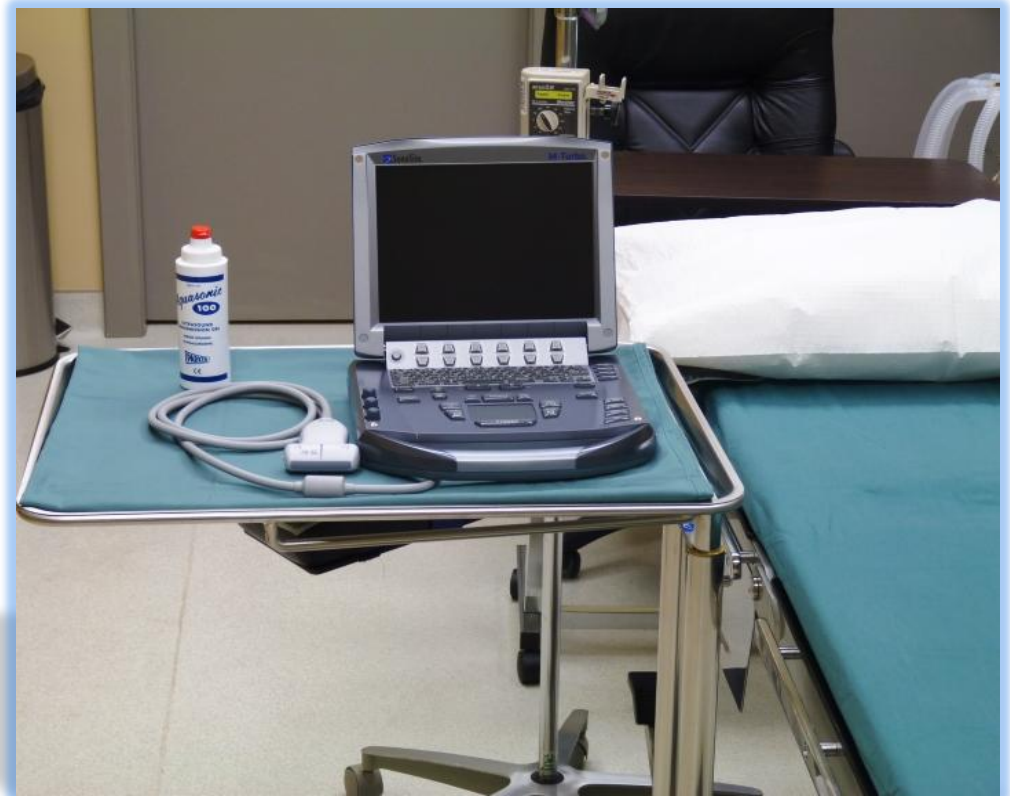
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# Welcome to White Rock Orthopaedic Surgery Centre

- *In-house 'point-of-care' diagnostics:*

✓ Ultra Sound

State-of-the-art  
digital equipment



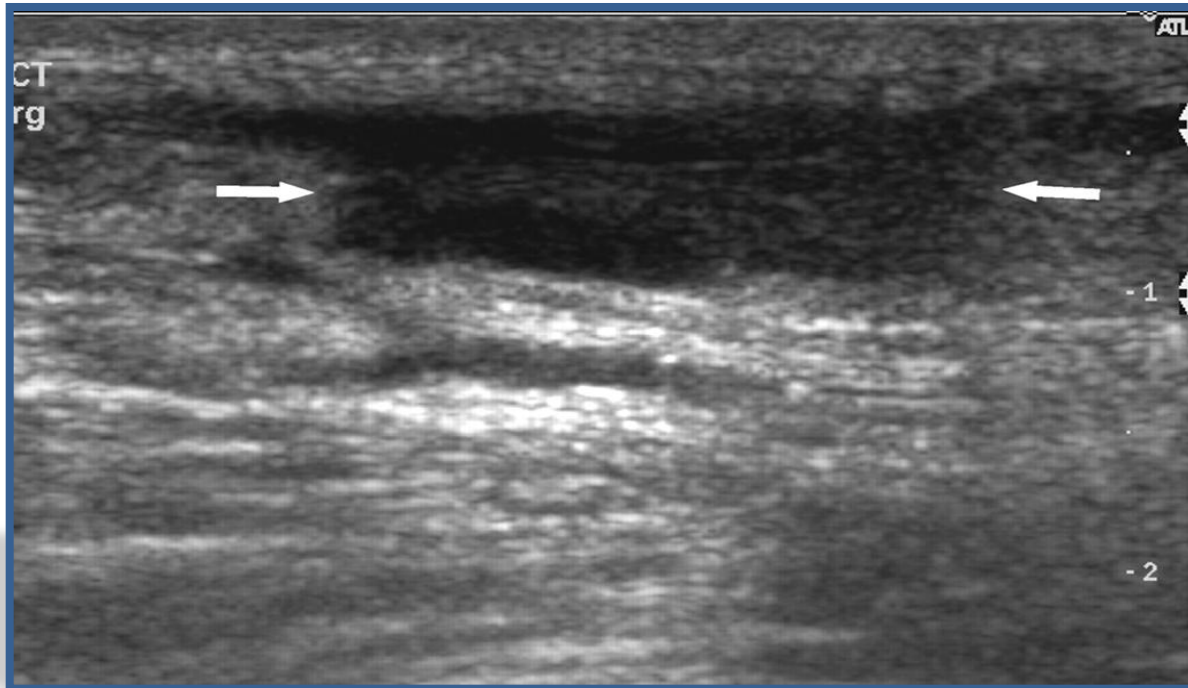
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- *'Point-of-care' Ultra-sound*
- ✓ Targeted assessment by treating surgeon
- ✓ On-site, non-invasive, rapid
- ✓ May obviate need for MRI

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© *'Point-of-care' ultra-sound*

e.g. Achilles tendon injury: torn or not?



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- *'Point-of-care' ultra-sound:  
Improved accuracy of injections*

✓ Joint injection:  
Knee

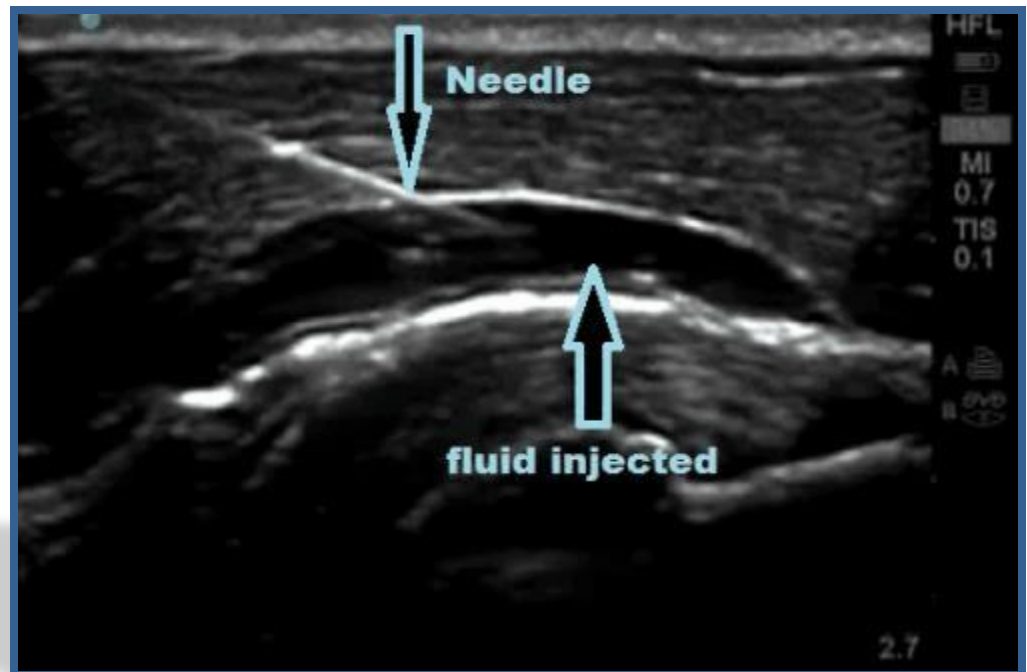




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- *'Point-of-care' ultra-sound:  
Improved accuracy of injections*

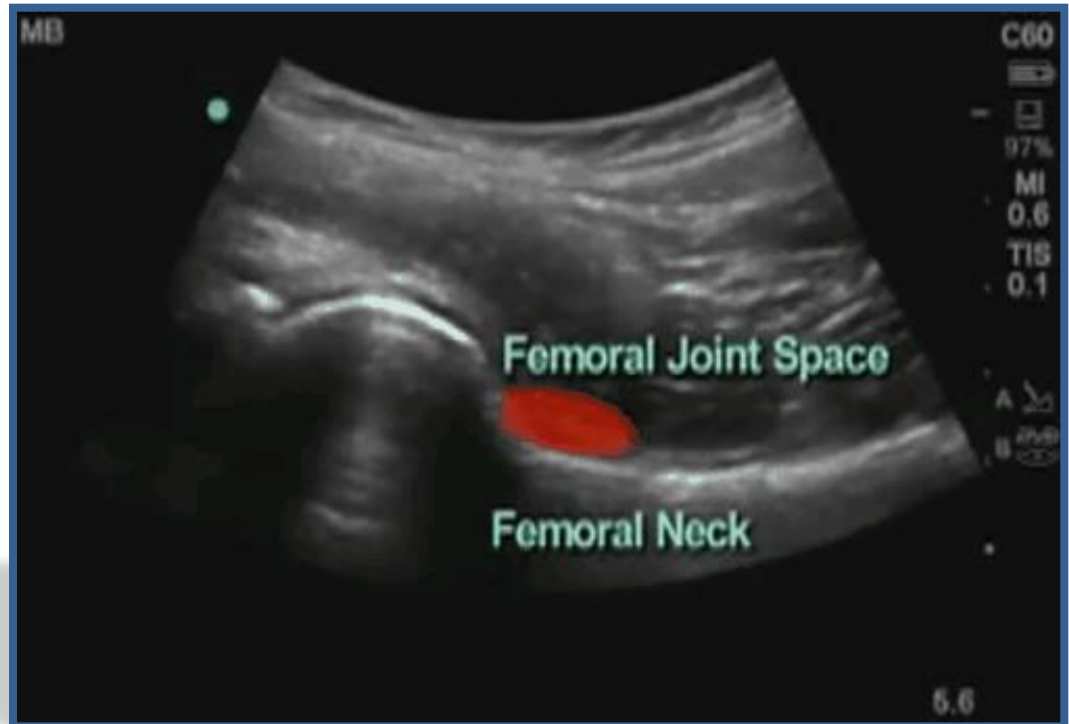
✓ Joint injection:  
Shoulder



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- *'Point-of-care' ultra-sound:  
Improved accuracy of injections*

✓ Joint injection:  
Hip



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- *'Point-of-care' ultra-sound:  
Improved accuracy of injections*

✓ Tendon  
injection



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◎ *In-house 'point of care' diagnostics:*

- ✓ X-Ray
- State  
of-the-art  
digital  
equipment



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◎ *'Point-of-care' X-ray:*

✓ Convenient:

➤ NO in-hospital waiting

➤ Immediate discussion

✓ Fast and safe

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- *'Point-of-care' X-ray*
- ✓ Increased safety thru minimized exposure:
  - X-rays *'as needed'* only
- ✓ Intra-operative X-ray imaging

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- Expedited MRI as required
- Various private MRI clinics
- Usually MRI can be obtained within 5-7 days



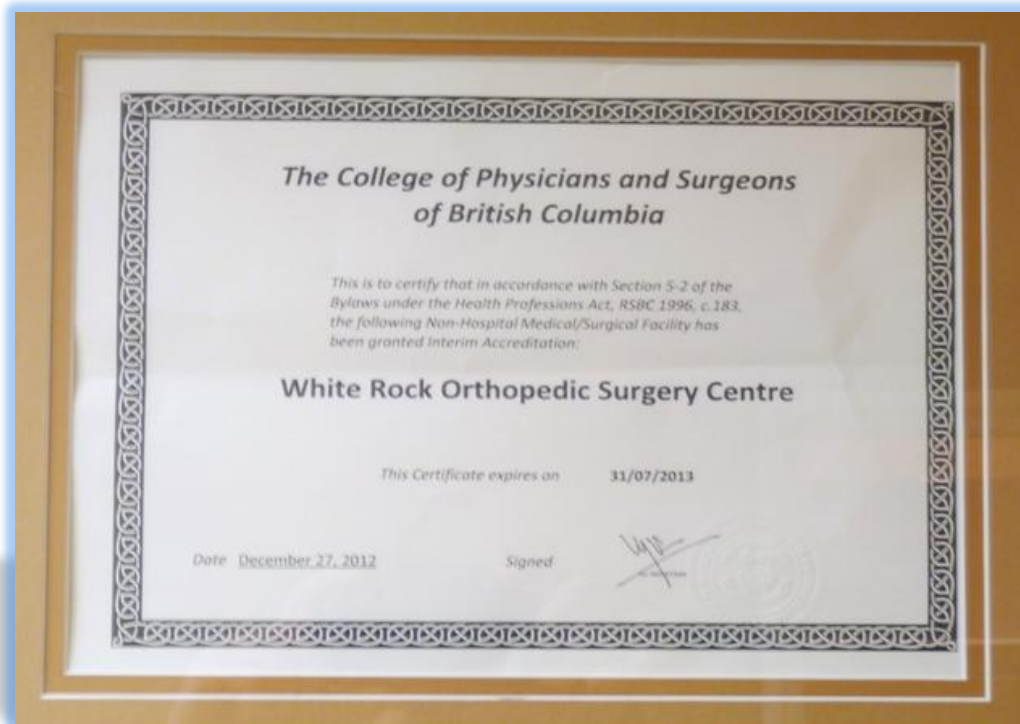
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- *Non-surgical treatment :*
  - ✓ life-style coaching
  - ✓ conditioning / physiotherapy
  - ✓ bone health / osteoporosis assessment

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## ● *Custom bracing*

Most common:

- ✓ Knee Osteoarthritis
- ✓ Knee Instability (ACL)

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✓ Custom  
knee  
bracing



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## ◎ *Injection Therapy:*

- ✓ Accuracy increased by ultra-sound guidance
- ✓ Minimal or no pain with ultra-sound guidance
- ✓ May be uncomfortable for few days afterward

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## ◎ *Injection Therapy*

State of the art:

- ✓ preparation of skin minimizes discomfort →  
local anaesthetic
- ✓ ultra-sound minimizes discomfort →  
direct access, fewer attempts needed
- ✓ ultra-sound increases accuracy →  
injection more effective

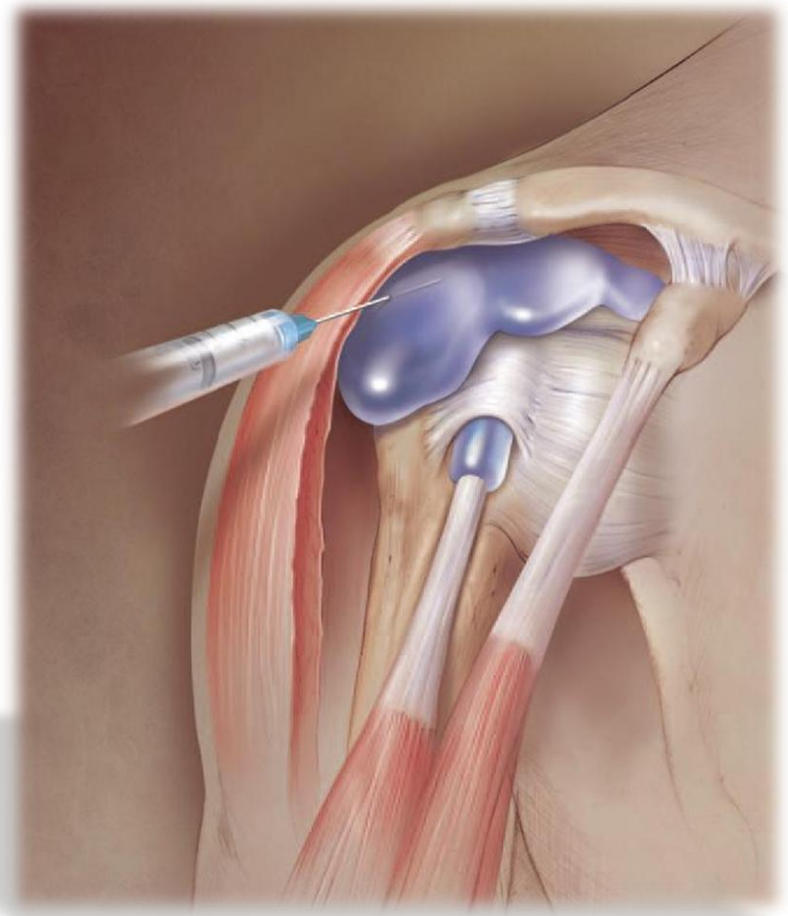


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- *Injection Therapy:*

- 1) *Cortisone*

- *anti-inflammatory*



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- *Injection Therapy*

- 1) *Cortisone: Anti-inflammatory*

- 90-95% effective

- Accuracy increased by ultrasound guidance

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## ◎ *Injection Therapy*

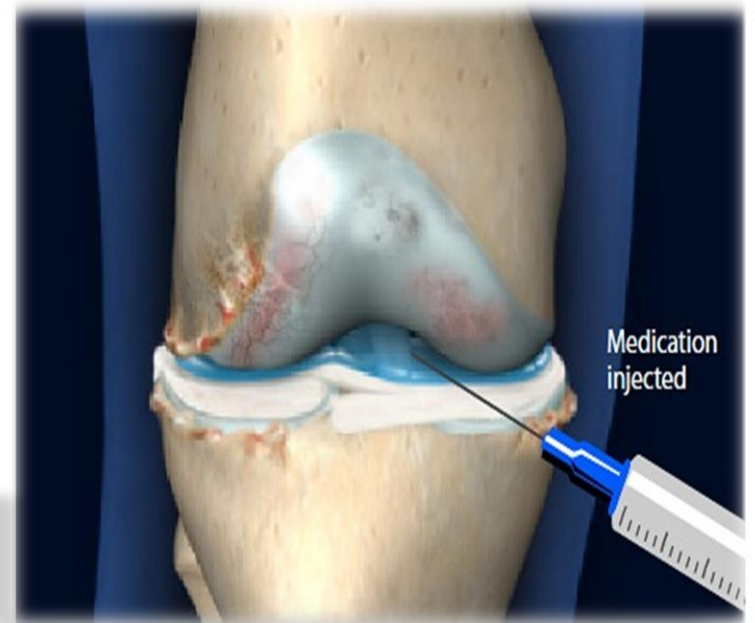
### 1) Cortisone: Anti-inflammatory

- Not a cure, variable length of pain relief
- Inexpensive
- Can be repeated

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- *Injection Therapy:*

2) *Visco-  
supplementation  
- lubricant*



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- *Injection Therapy*

- 2) *Visco-supplementation: Lubricant*

- for osteoarthritis
    - 80-85% effective
    - can be repeated

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- *Injection Therapy*

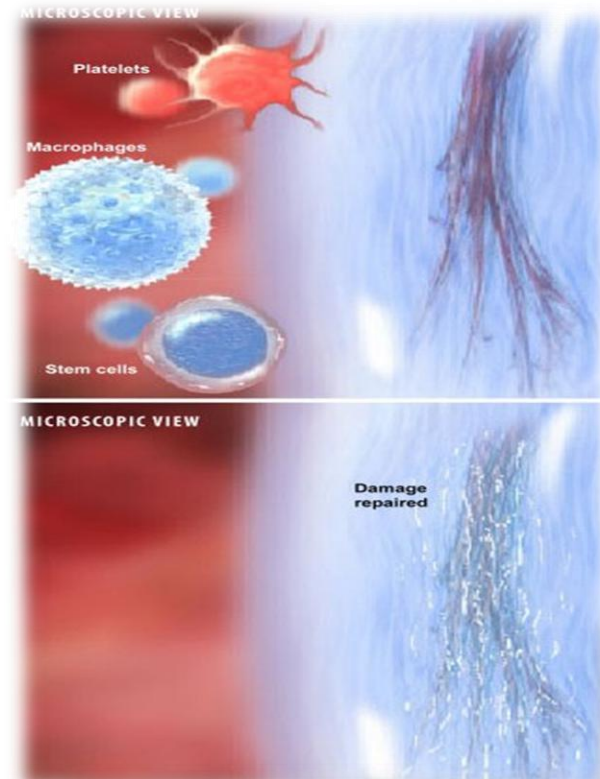
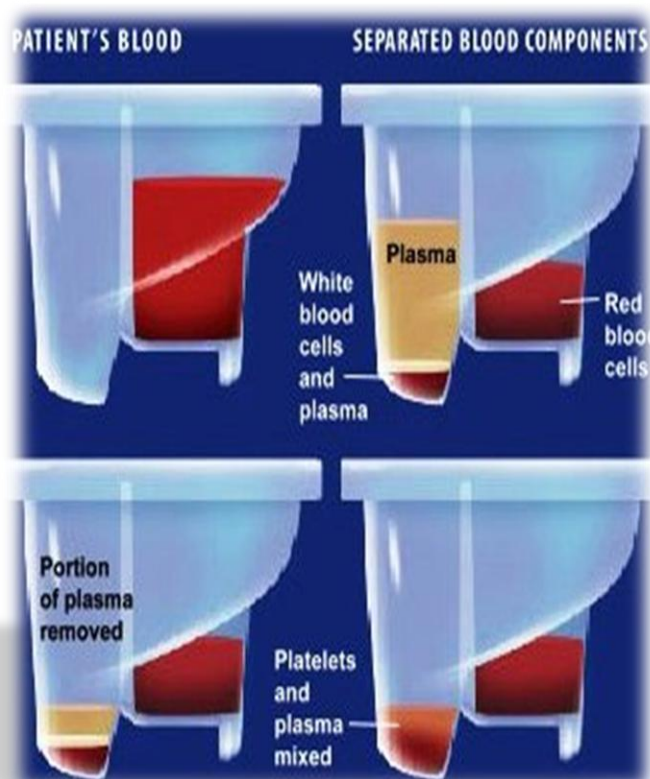
- 3) *Platelet Rich Plasma: Regenerative*

- ✓ Closest to stem cell therapy
    - ✓ Soft tissue healing: ligaments / tendons
    - ✓ Osteoarthritis
    - ✓ In-house processing of blood sample
    - ✓ Injection approximately 30 minutes later

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- *Injection Therapy*

## 3) *Platelet Rich Plasma: Regenerative*



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- *Injection Therapy*

- 4) *Botox Injection: Pain-receptor 're-set'*

- Osteoarthritis → may be supportive / palliative





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## Surgery:

- ✓ Hospital wait list reasonable for hip and knee replacement (2-6 months)
- ✓ Hospital wait list long for almost all other orthopaedic procedures (18-24 months at Peace Arch Hospital)

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## Surgery at WROSC:

- ✓ Non-hospital surgical facility
- ✓ Emphasis on 'safety first and foremost'
- ✓ Extensive ongoing accreditation process
- ✓ Exceeding hospital standards

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- Careful preparation
- Assessment well prior to surgery:
  - ✓ Initial safety screen by surgeon
  - ✓ Laboratory work-up if needed
  - ✓ Secondary safety screen by anesthesiologist

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- Dedicated team:
  - ✓ Surgeon
  - ✓ Anesthesiologist
  - ✓ Peri-operative nurses
  - ✓ Recovery room nurse
  - ✓ Sterile processing technician
  - ✓ Frontdesk staff



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- Surgery:

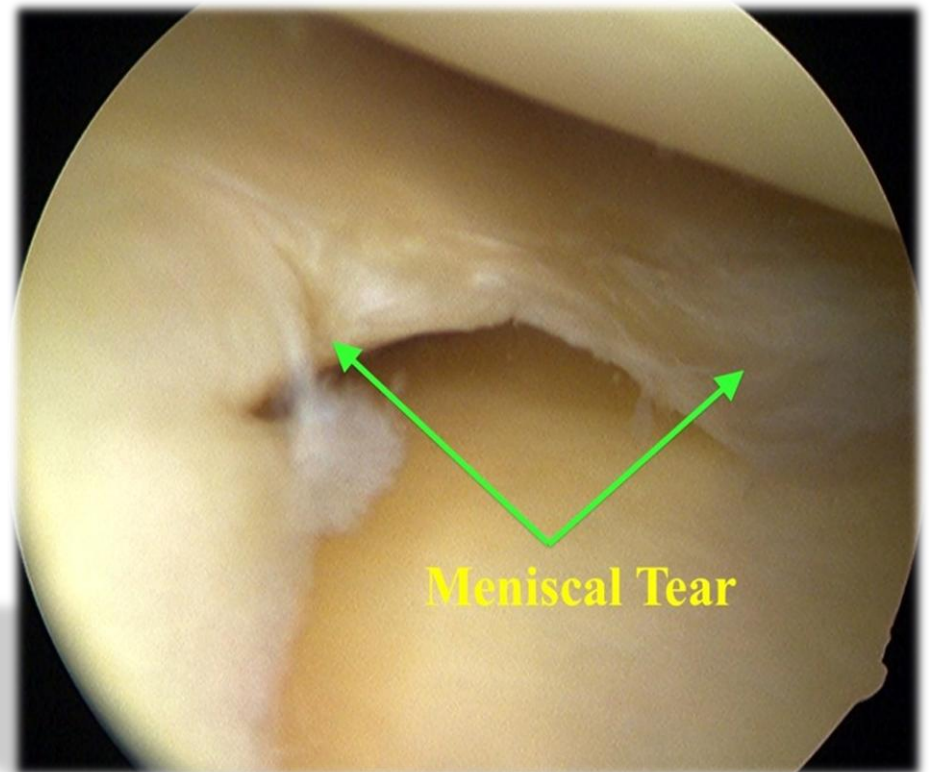
- ✓ *Knee Arthroscopy (“Knee Scope”)*

- Meniscal tear
- Loose bodies
- Early arthritis
- Other

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Knee Arthroscopy:

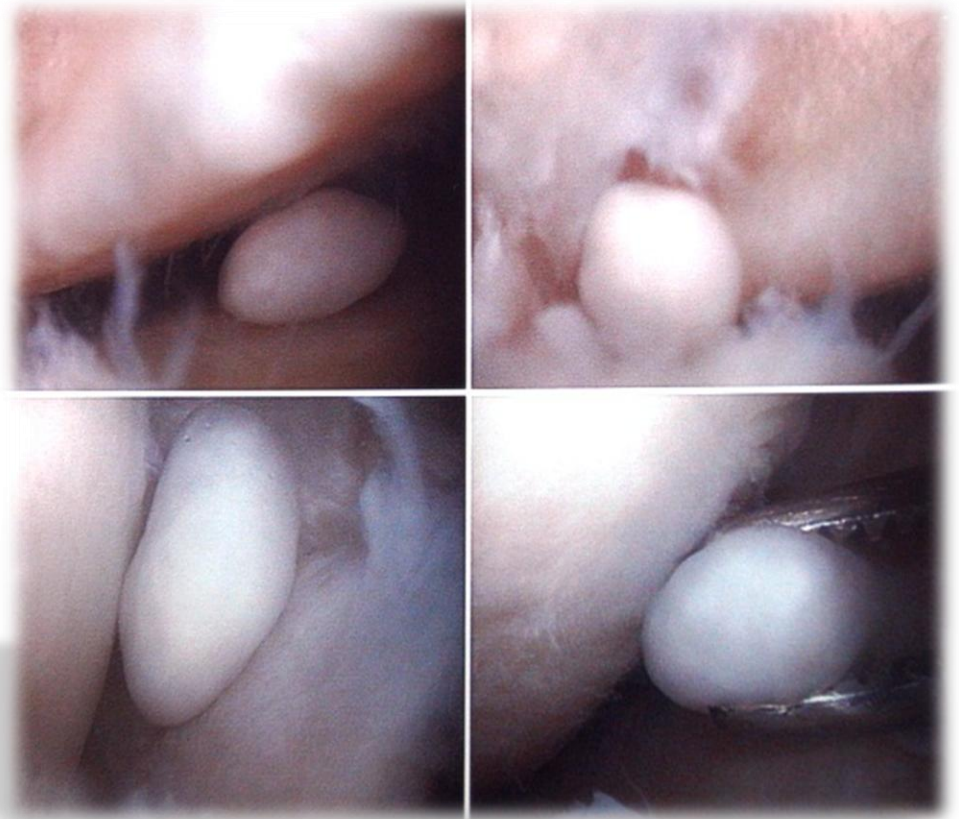
➤ *Meniscal Tear*



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Knee Arthroscopy:

➤ *Loose Body*



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- Knee Arthroscopy (“Knee Scope”)
  - Intra-venous sedation and local anesthesia
  - Comfortable and safe
  - Minimal risk of pain or feeling unwell
  - Home approx 1 hour after surgery

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- *Knee Arthroscopy: Recovery / Rehab*
  - Week 1: Difficult to get around (crutches/cane)
  - Week 2: Much better
  - Week 3-8: Progressive exercise (bicycle, etc.)
- Recovery slower if arthritis present

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- *Surgery: Knee ACL Reconstruction*
  - Under general (or spinal) anesthesia
  - Extensive pain management
    - ✓ Pre-surgical use of local anesthesia
    - ✓ Cryotherapy
    - ✓ Medication

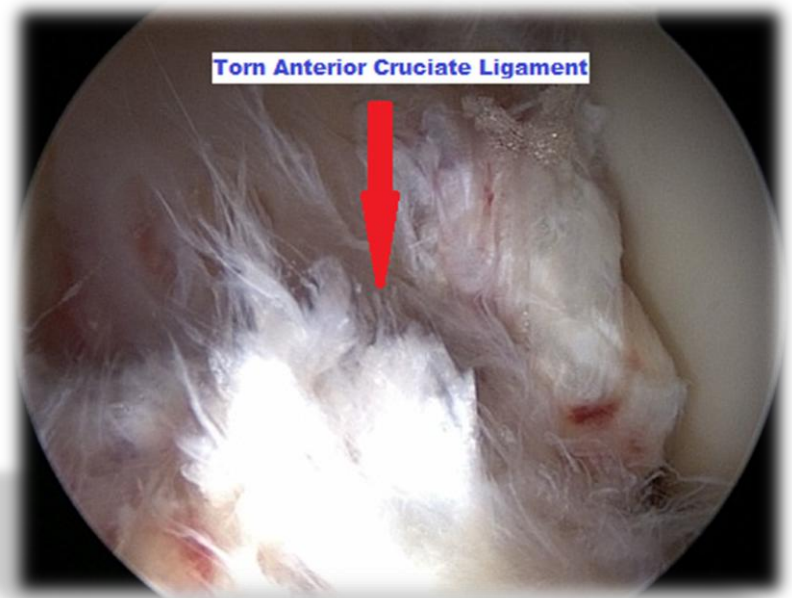
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- *ACL Reconstruction*

Normal ACL



Torn ACL



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- *Surgery: Knee ACL Reconstruction*
  - Arthroscopic reconstruction
  - Hamstrings or donor tendon
  - Surgery time 60-90 minutes
  - Fixation with variable loop toggle and interference screw



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## © *ACL Reconstruction: Recovery / Rehab*

- ✓ Home approx 1 hour after surgery
- ✓ 0-2 weeks: Learn to walk (crutches/cane)
- ✓ 2-6 weeks: Learn to bicycle  
(range of motion)
- ✓ 6-12 weeks: Agility, progressive cardio  
(continued...)

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- *ACL Reconstruction: Recovery / Rehab*
  - ✓ 4 months: 70% of final strength
    - jogging on treadmill OK
  - ✓ 6 months: 80% of final strength
    - if pivoting activity: *brace*
  - ✓ 12 months: 100% of final strength



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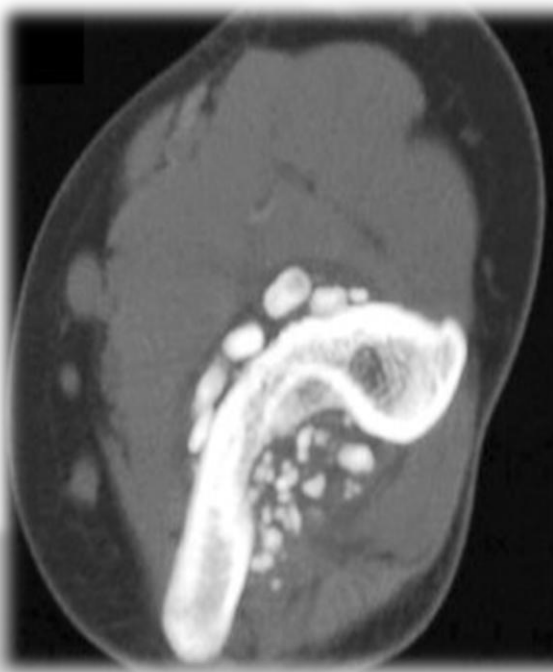
## ◎ *Shoulder Arthroscopy (“Shoulder Scope”)*

- ✓ Under general anesthesia
- ✓ Extensive pain management
  - Pre-surgical use of local anesthesia
  - Cryotherapy
  - Medication

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## ◎Shoulder Arthroscopy:

### ➤ *Loose Bodies*





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## ● Shoulder Arthroscopy:

*Early Osteoarthritis,  
degenerative soft tissue*

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- Shoulder Arthroscopy:

*Recovery / Rehab*

- ✓ Home approximately 2 hours after surgery
- ✓ Pain management with cryotherapy and medication
- ✓ Assessment at 2 weeks, earlier if needed

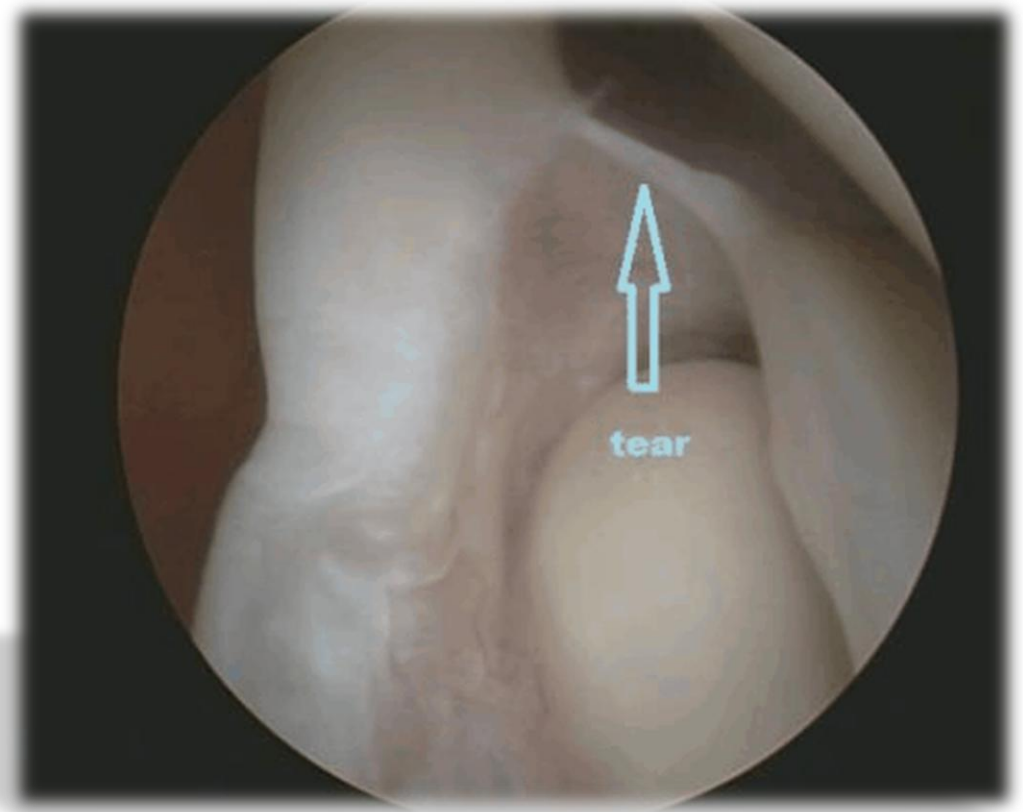
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- *Shoulder Arthroscopy:  
Recovery / Rehab*
  - ✓ No repair:
    - Early physio at 2 weeks
    - Physio for 6-8 weeks

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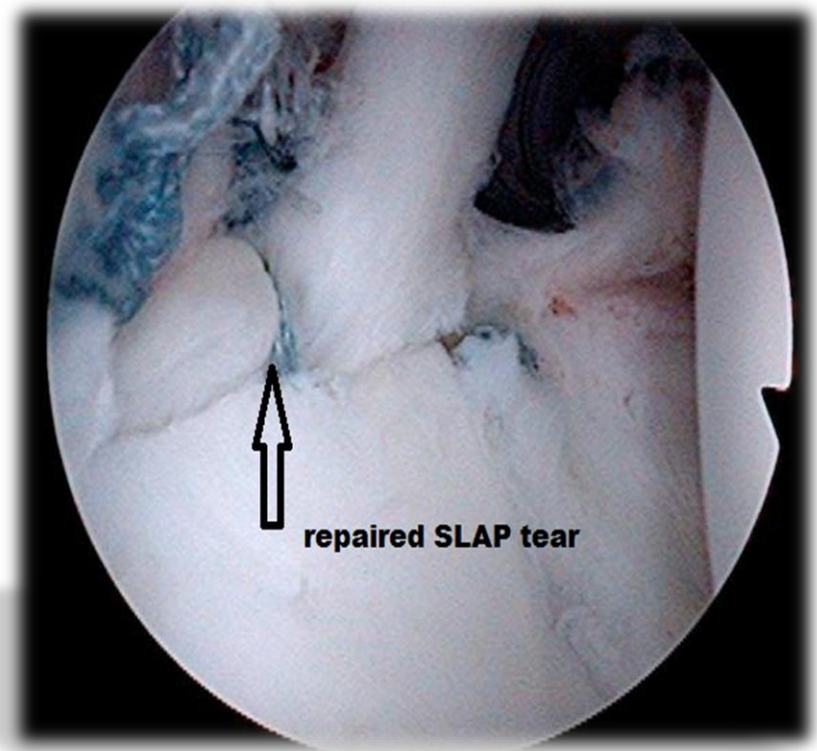
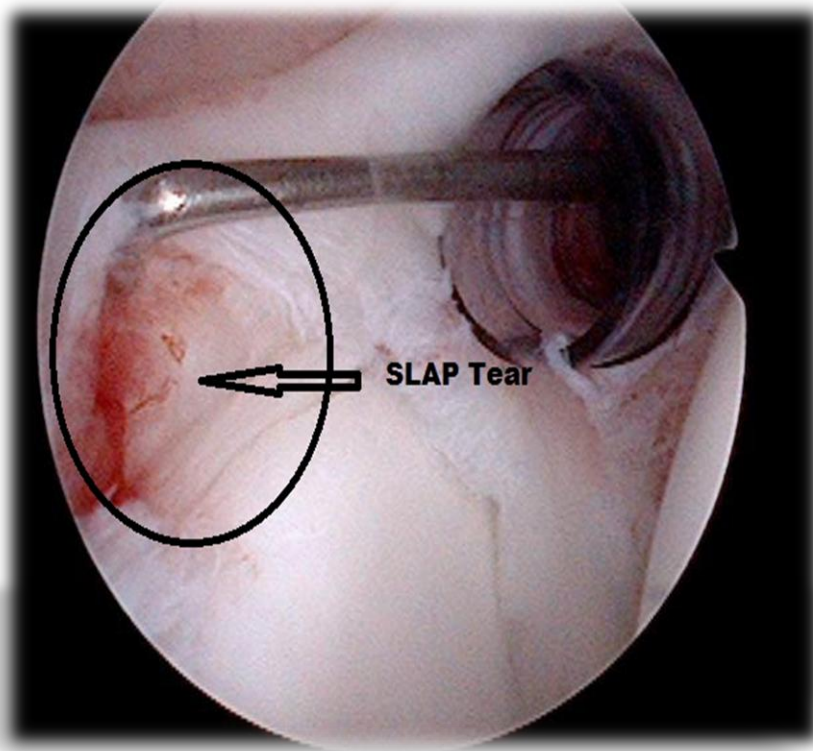
## © *Shoulder Arthroscopy:*

- SLAP lesion



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- Shoulder Arthroscopy: *SLAP Repair*



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- Shoulder Arthroscopy:

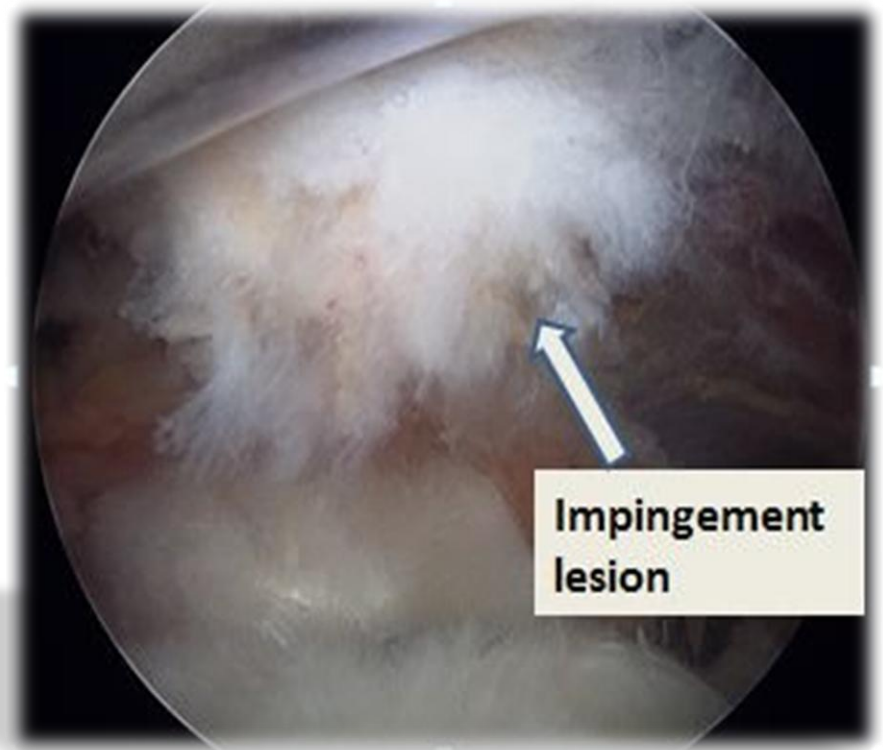
*Recovery / rehab after SLAP repair*

- ✓ protection with arm by side 6-8 weeks
- ✓ physio for 3-4 months

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## ◎ Shoulder Arthroscopy:

- *Rotator Cuff  
Impingement*



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- *Shoulder Arthroscopy:*

## Rotator Cuff Tear

*Normal Rotator Cuff*

*Rotator Cuff tear*



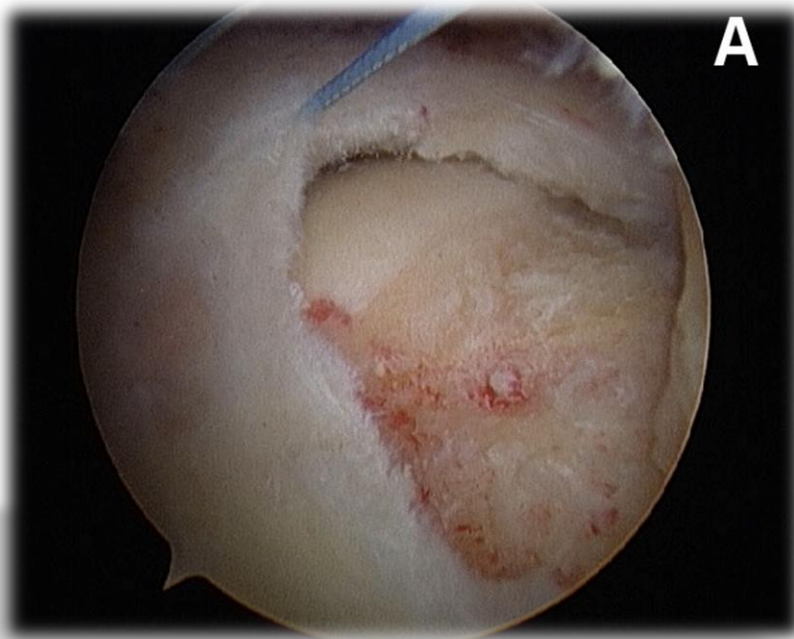


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- *Shoulder Arthroscopy with Rotator Cuff Repair*

Torn Rotator Cuff

Repaired Rotator Cuff



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- Shoulder Arthroscopy:

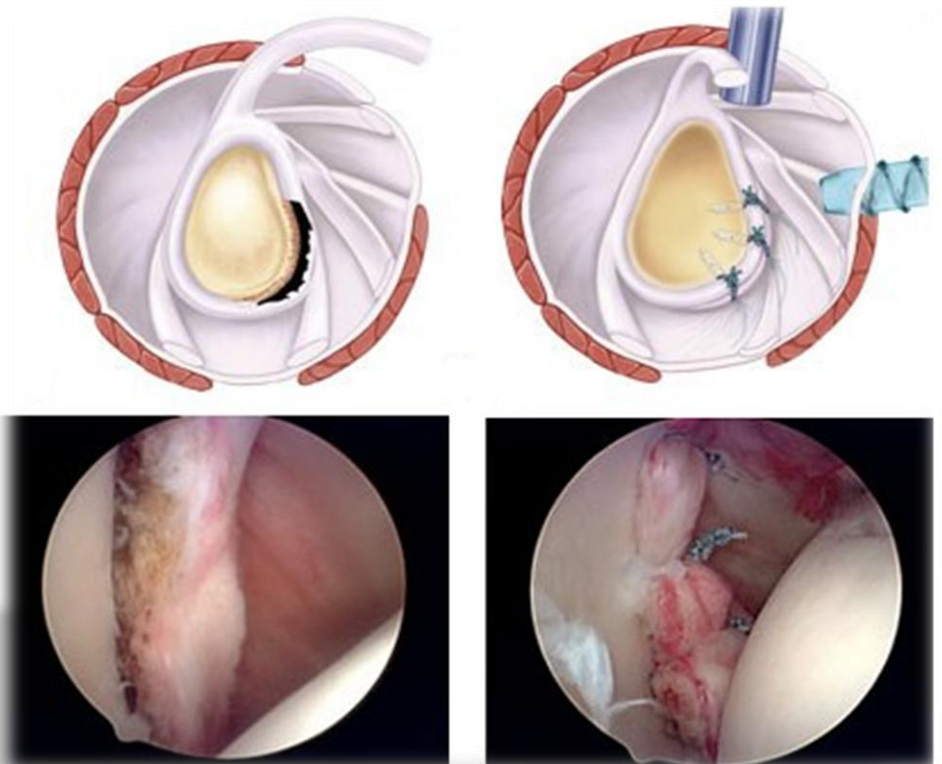
*Recovery / Rehab after Rotator Cuff Repair*

- ✓ Protection with arm by side 6-8 weeks
- ✓ Physio for 3-4 months

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- Shoulder Arthroscopy:

✓ *Stabilization*



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- Shoulder Arthroscopy:

*Recovery / Rehab after Stabilization*

- ✓ Protection with arm by side 6-8 weeks
- ✓ Physio for 3-4 months



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- Foot and Ankle Surgery: *Bunion*



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## ©Foot and Ankle Surgery: *Hammertoe*



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- Foot and Ankle Surgery: *Cheilectomy*

✓ *Motion  
Preserving*



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## ● Foot and Ankle Surgery: *Fusion*

Arthritis of the  
Big Toe



Post  
Surgery

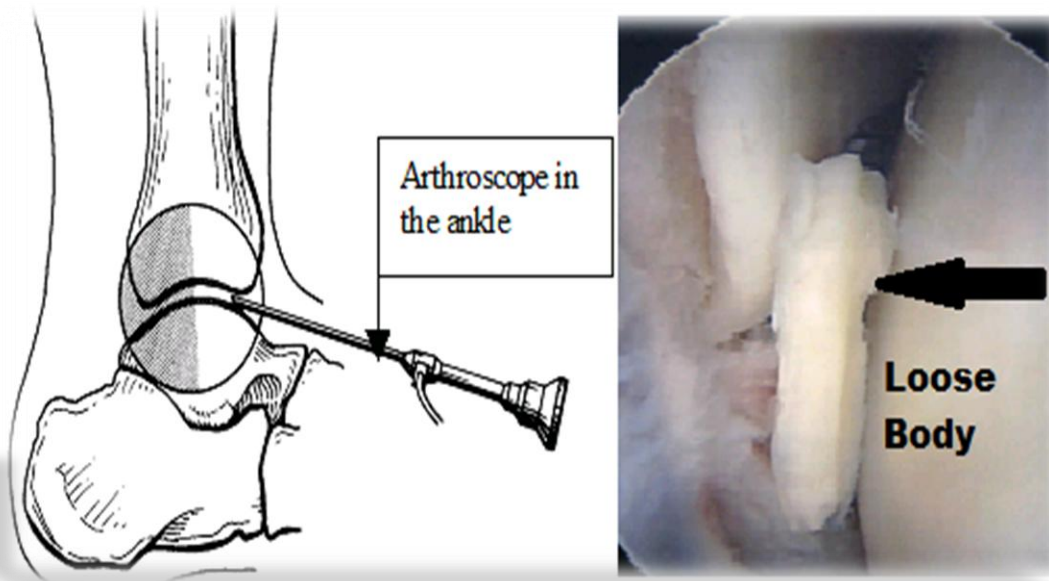


➤ Motion  
Sacrificing

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- Foot and Ankle Surgery:

## *Ankle Arthroscopy*



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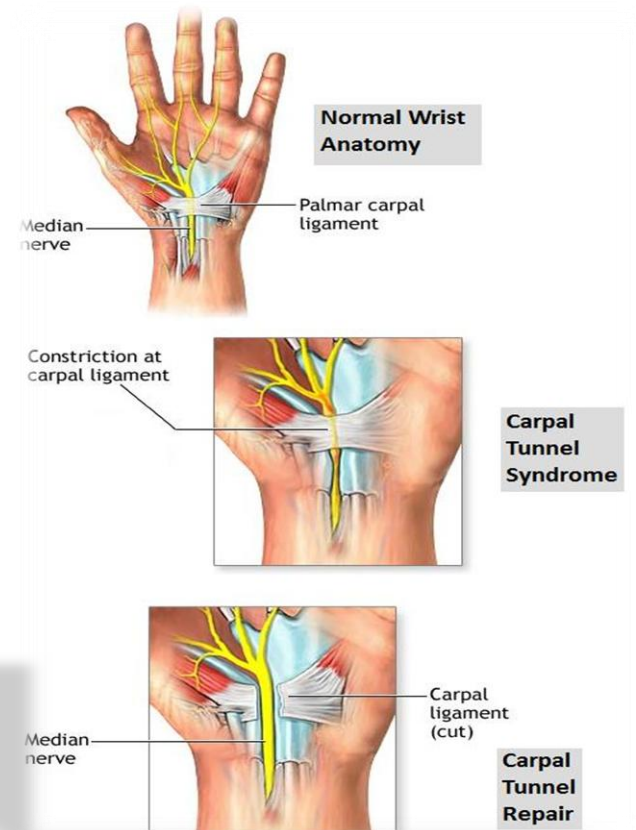
- *Foot and Ankle Surgery*

- ✓ Under IV sedation and local anesthesia:  
*comfortable and safe*
- ✓ Home approximately 1 hour after surgery
- ✓ Variable recovery, depending on procedure
- ✓ To be discussed with surgeon

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- Surgery of Hand and Wrist

- *Carpal Tunnel  
Release*



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## ☉ Surgery of Hand and Wrist: *Arthritis*

*Normal Hand Xray*



Figure 1

*With Arthritis*



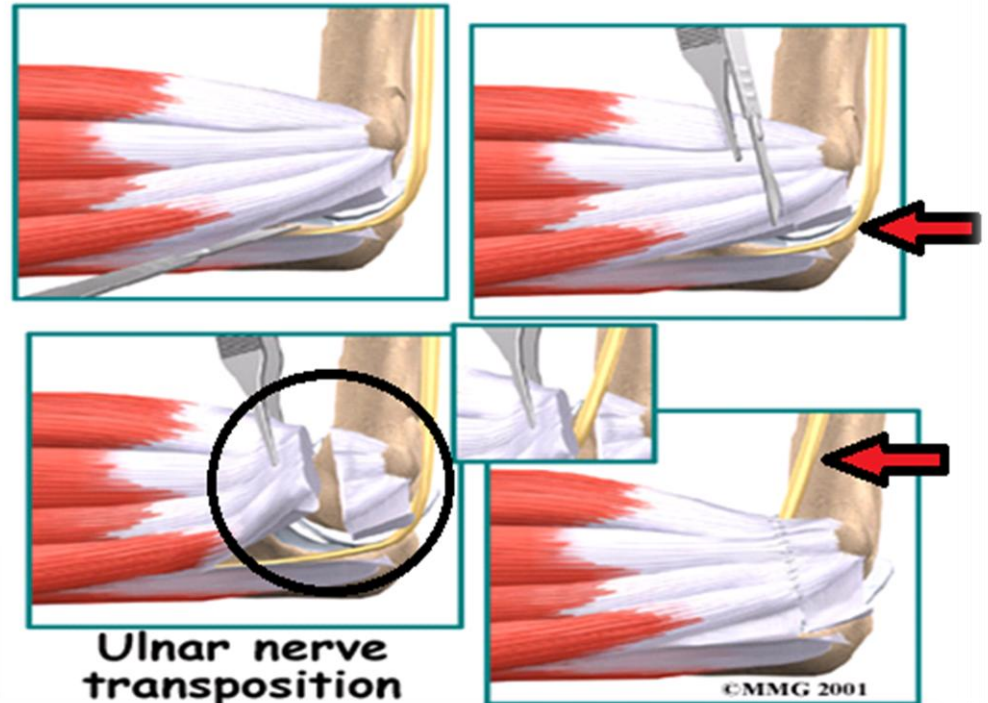
Figure 2



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- Surgery of Elbow:

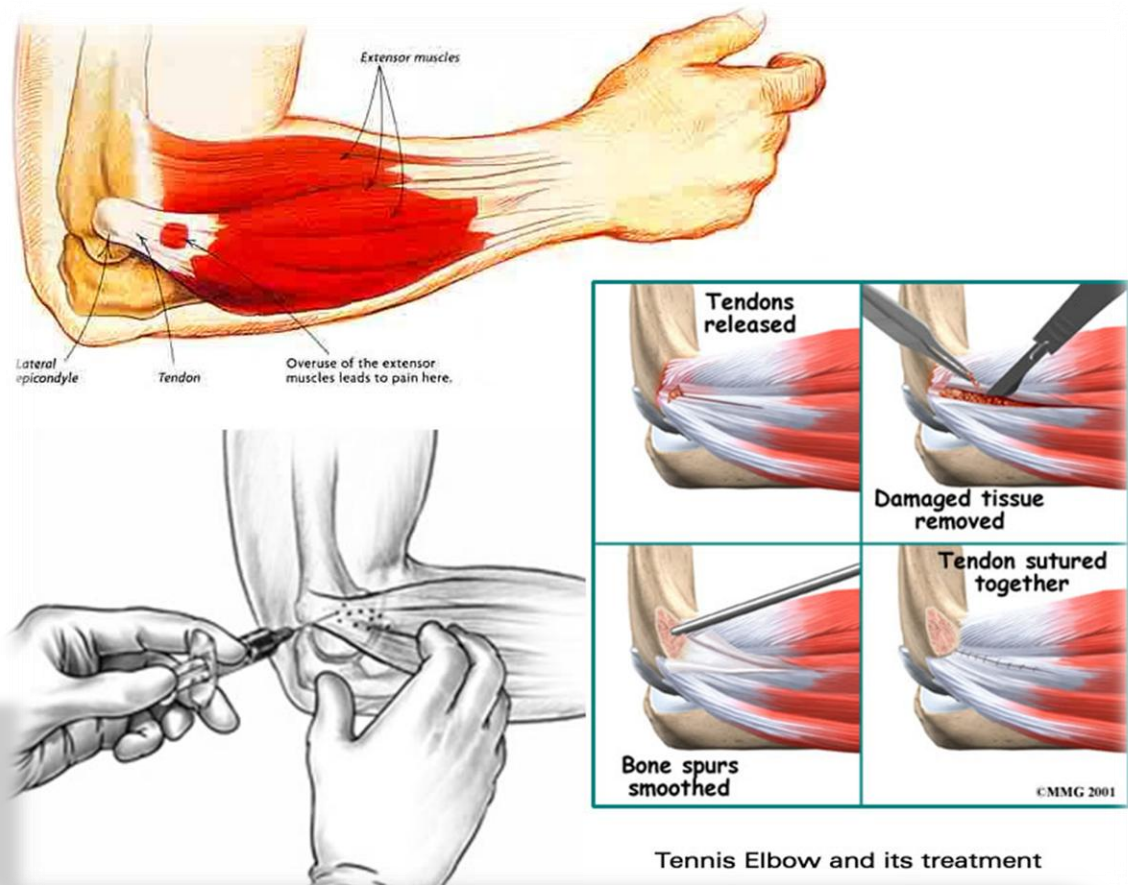
- ✓ *Ulnar Nerve  
Transposition*



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- Surgery of Elbow:

✓ *Tennis Elbow*



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## ◎ *Hand, Wrist and Elbow*

- ✓ Under IV sedation and local anesthesia:  
comfortable and safe
- ✓ Home approximately one hour after surgery
- ✓ Variable recovery, depending on procedure
- ✓ To be discussed with surgeon

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- *Removal of Hardware*
  - ✓ Most metallic implants used for fracture repair can be removed at WROSC
  - ✓ Level of anesthesia depending on type of hardware and location