

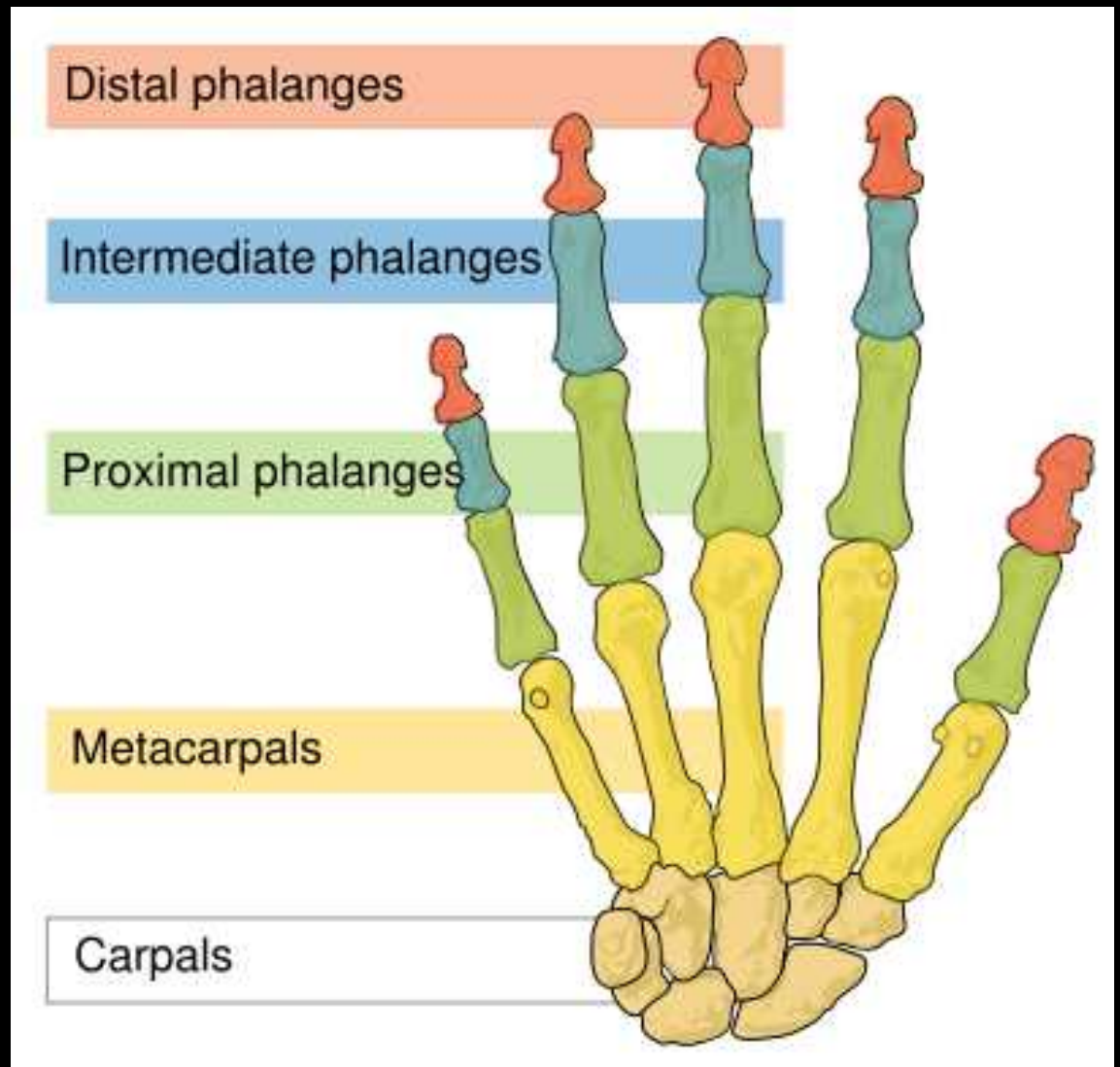
# Παθήσεις και Κακώσεις των Άνω Άκρων

Δρ. Χρήστος Κ. Γιαννακόπουλος

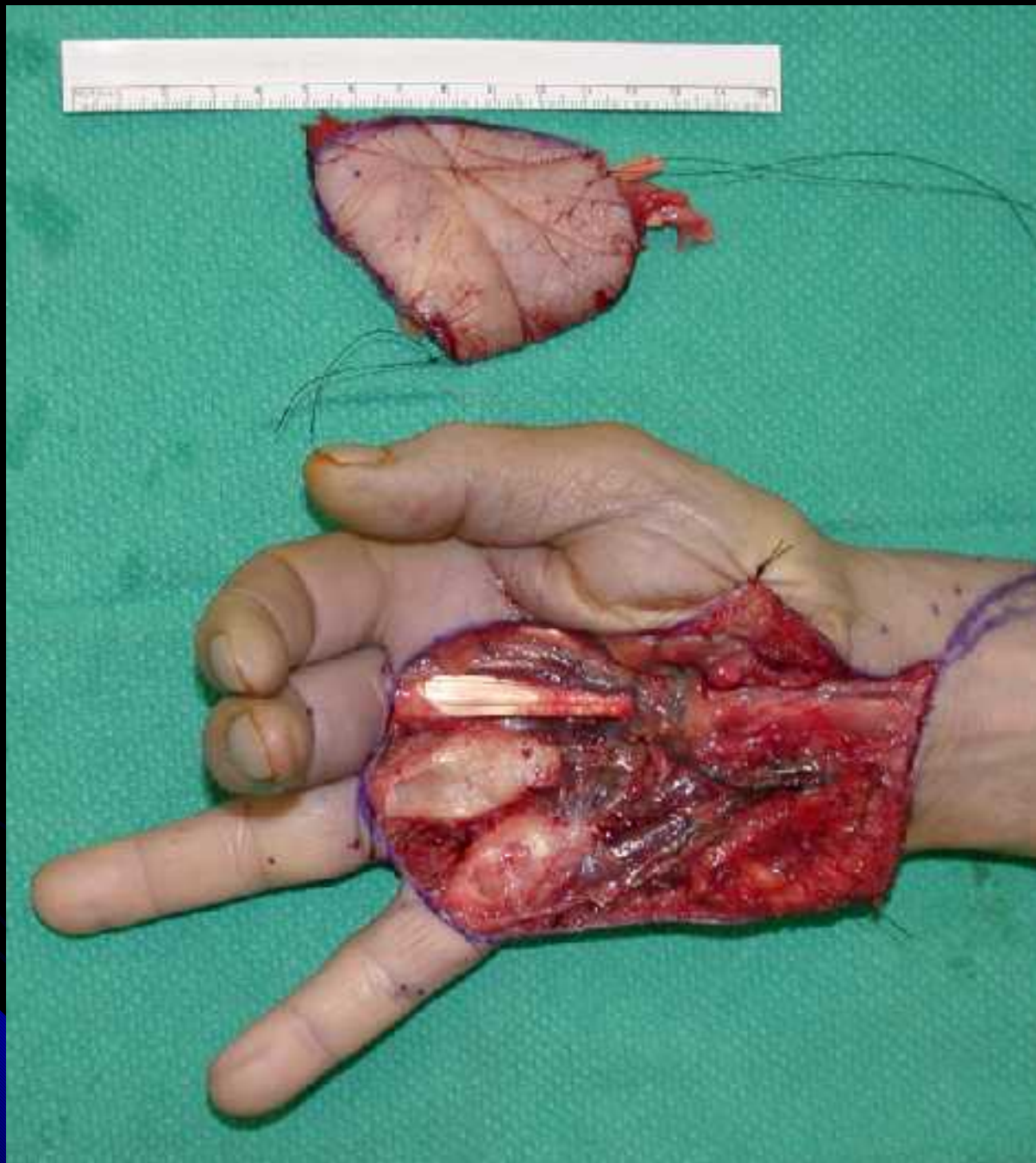
Ορθοπαιδικός Χειρουργός

Κέντρο Αρθροσκοπικής Χειρουργικής και  
Χειρουργικής Ώμου

Νοσοκομείο ΙΑΣΩ General, Αθήνα







# Παθήσεις Νυχιών





**Mallet Finger  
Injury**



**Mallet finger**



## Dorsal subluxation

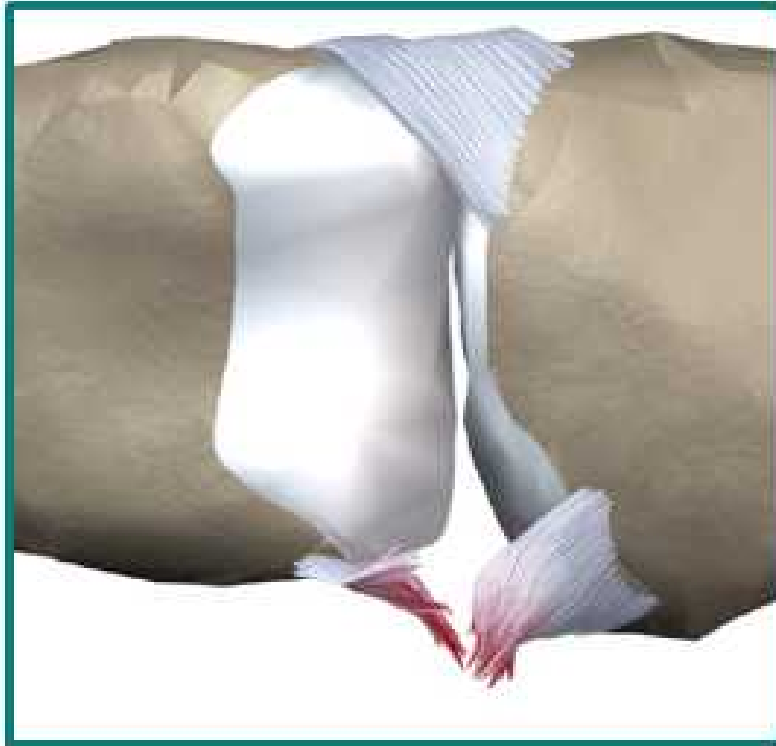




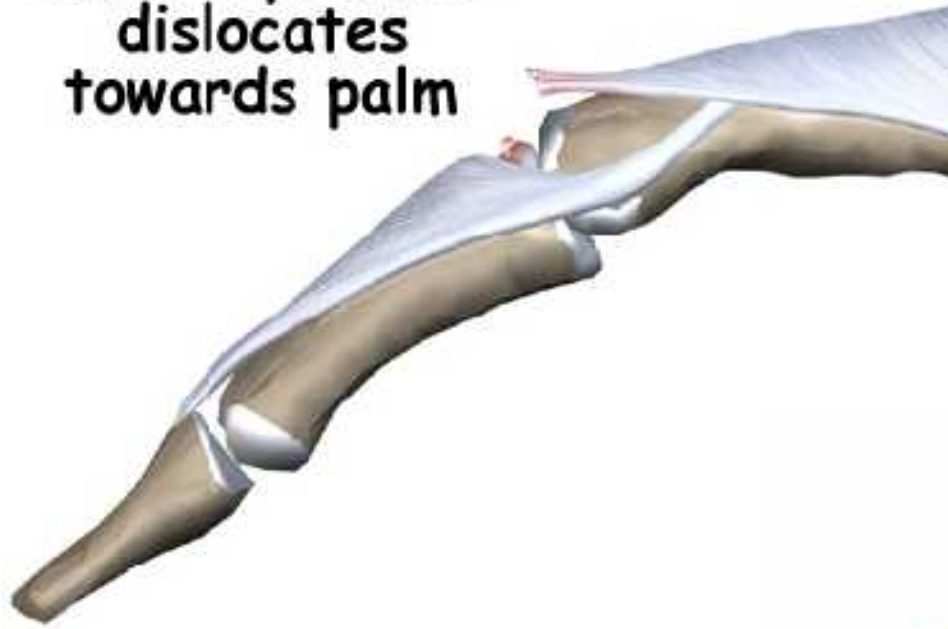


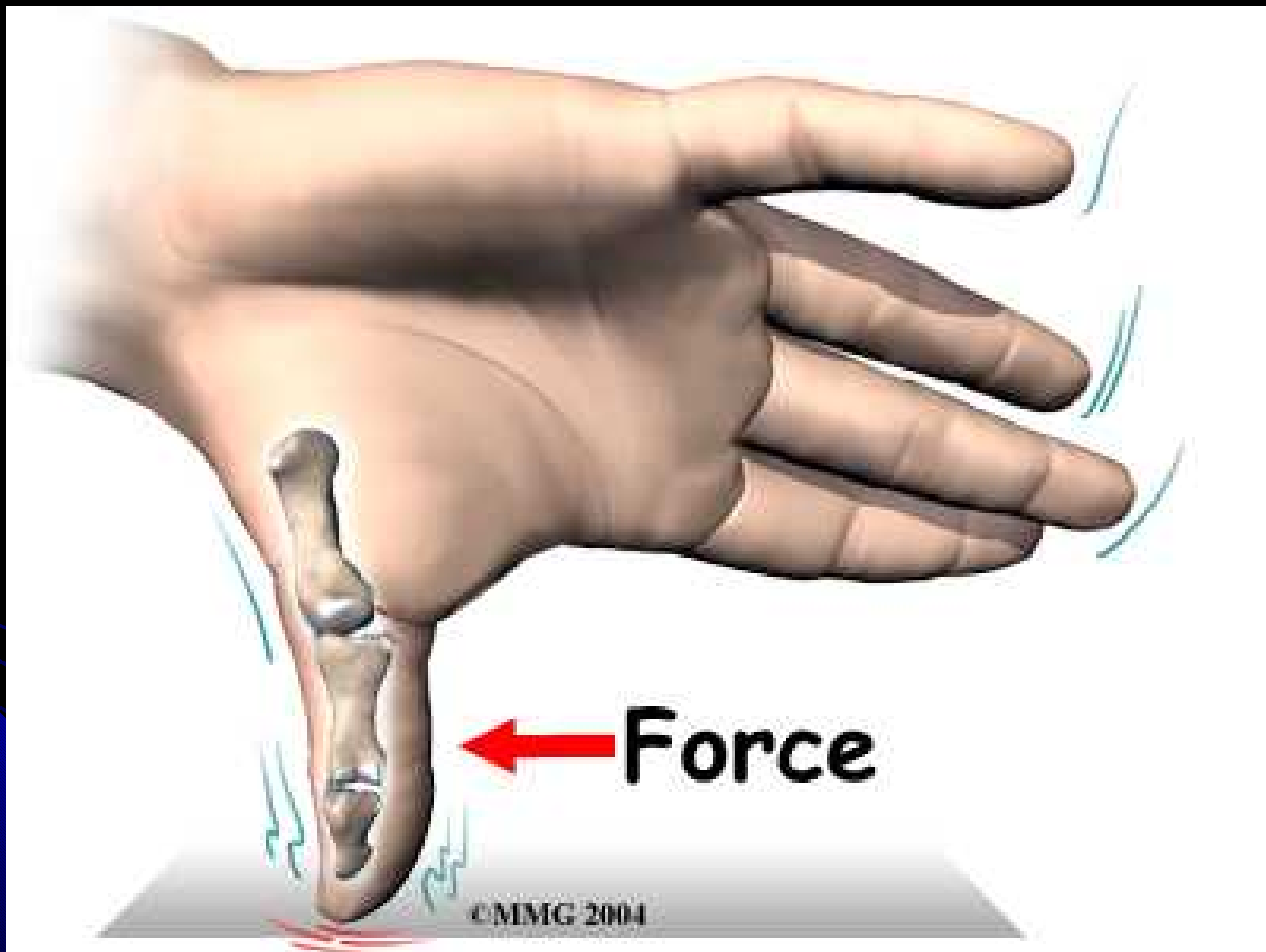


**Collateral  
ligament  
rupture**



**Middle phalanx  
dislocates  
towards palm**





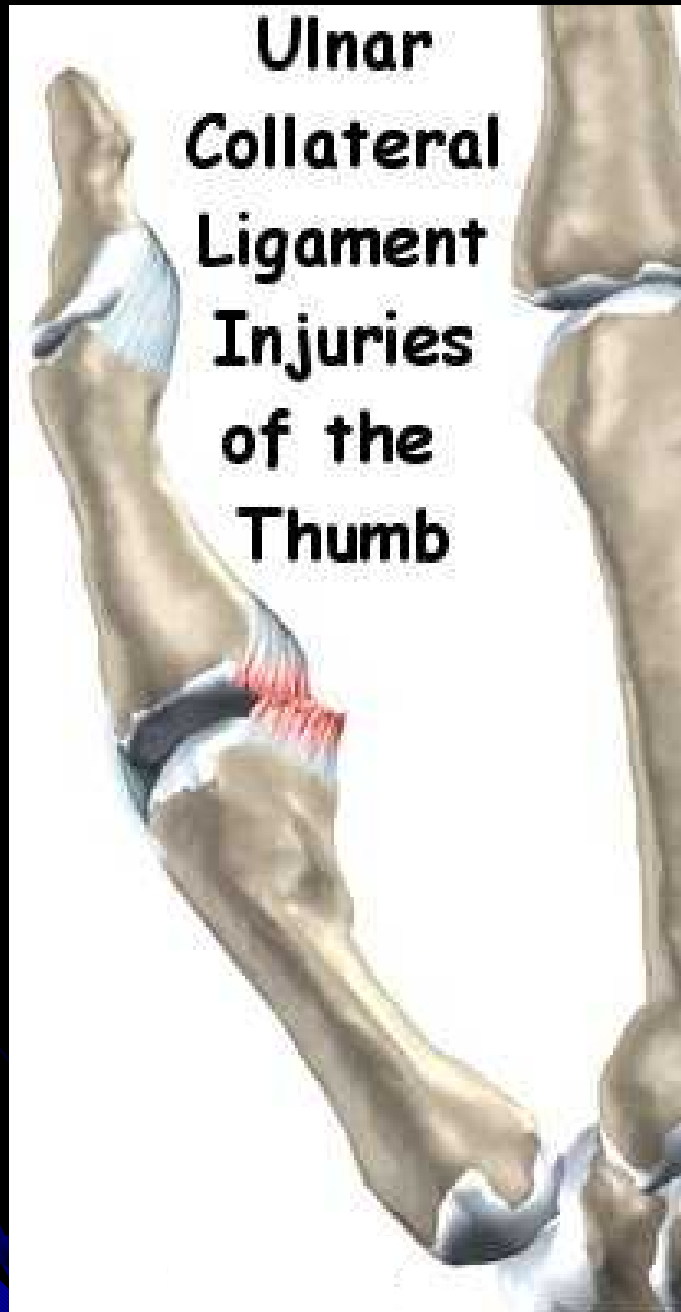
**Force**

©MMG 2004



AIDIL

# Ulnar Collateral Ligament Injuries of the Thumb



φυσιολογικό



παθολογικό

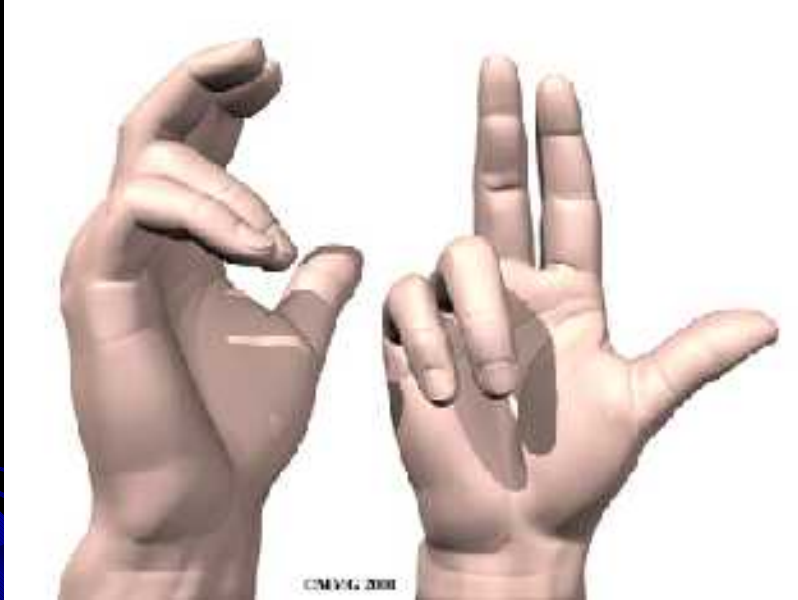


# Εκτινασσόμενος Δάκτυλος

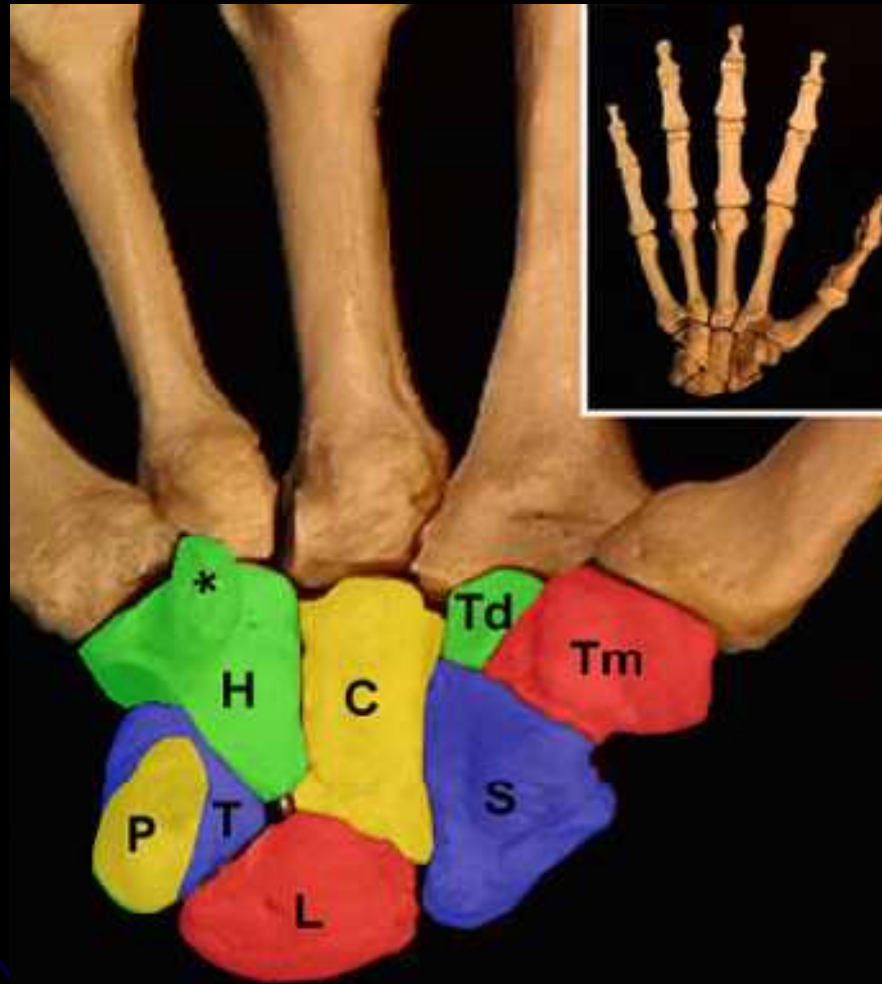


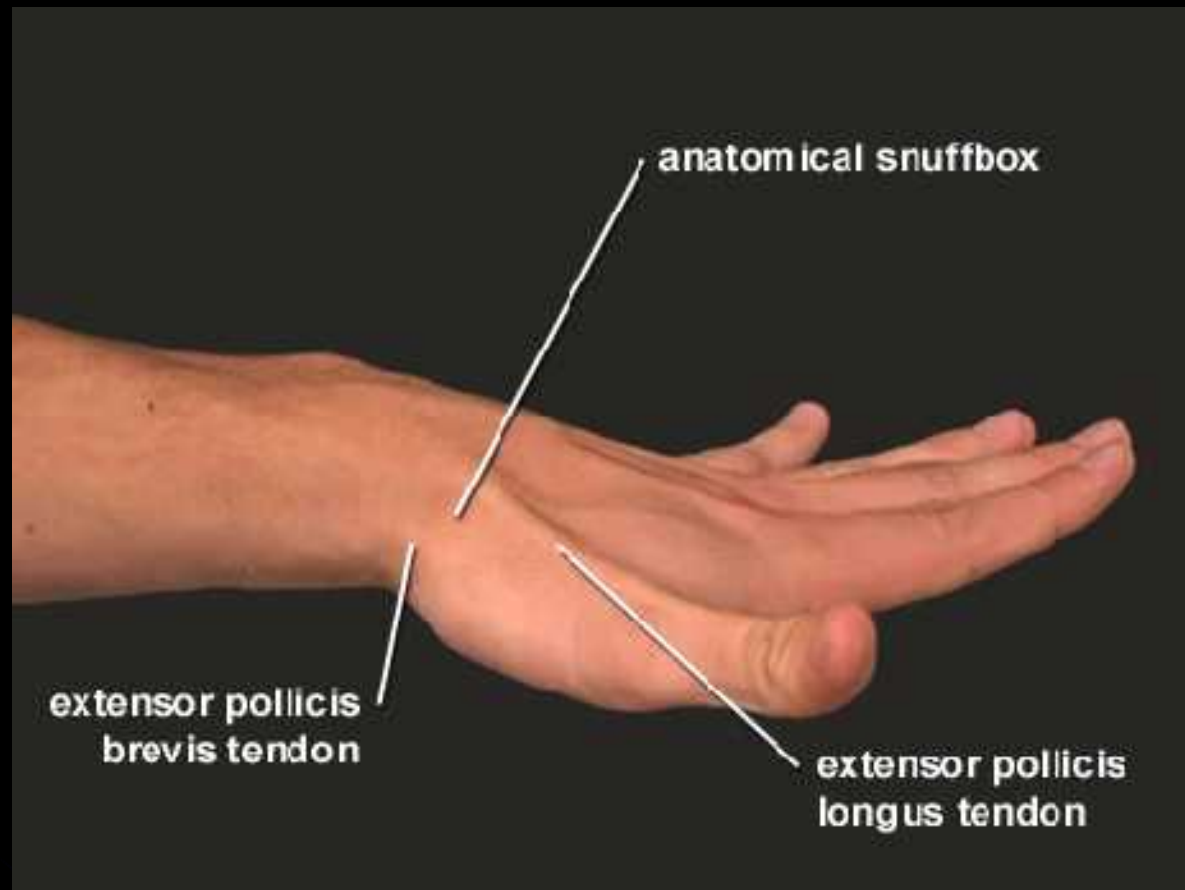


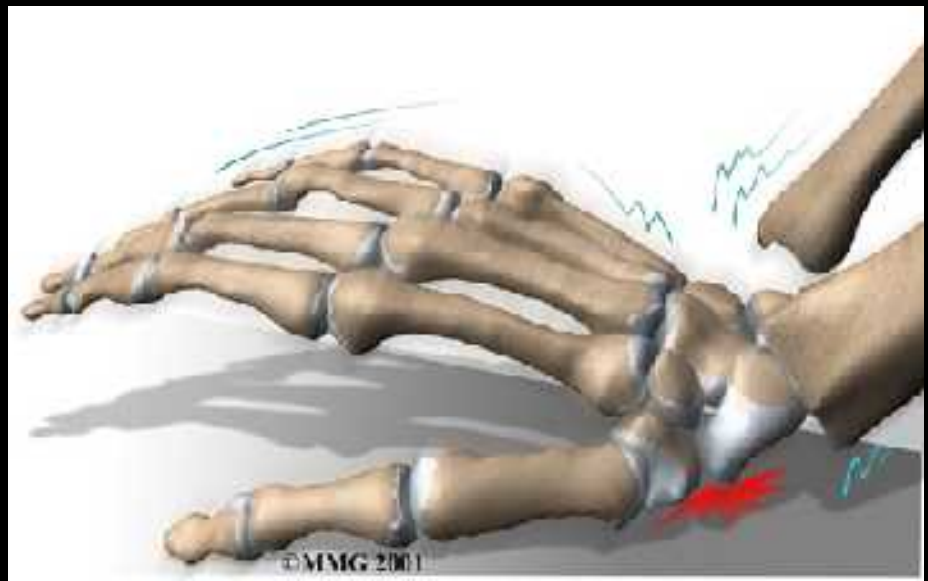
# Νόσος Dupuytren



# Καρπός







# Άσηπτη Νέκρωση Μηννοειδούς



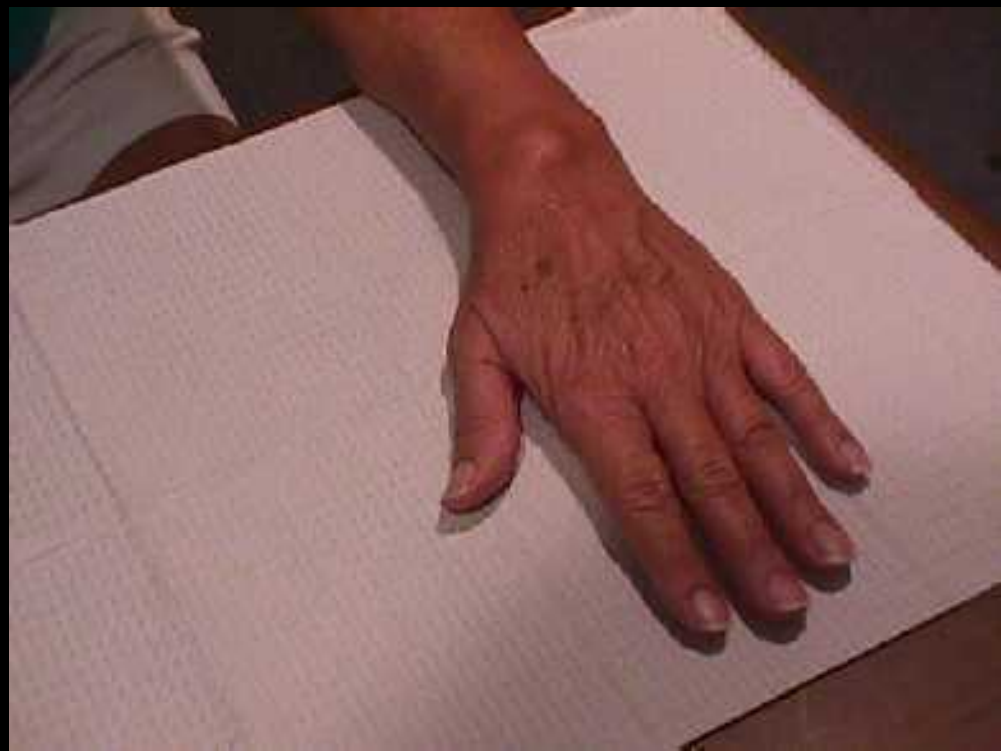
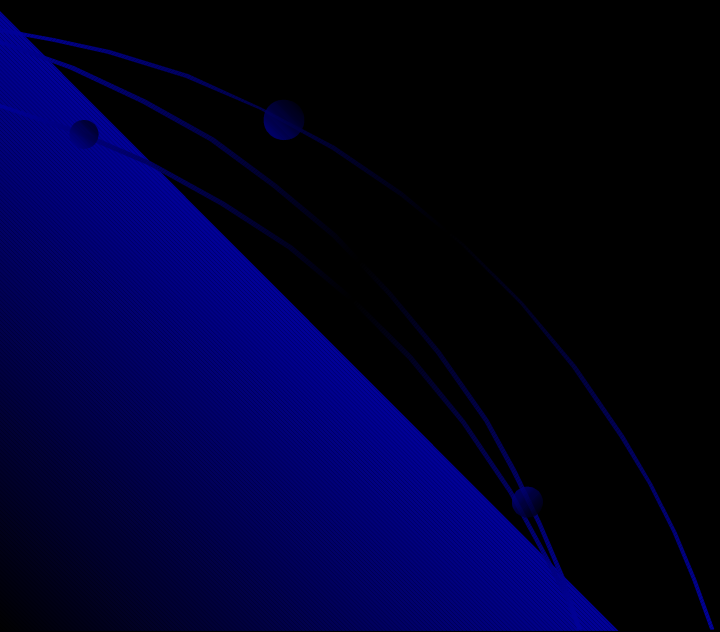
# Τενοντοθυλακίτιδα De Quervain



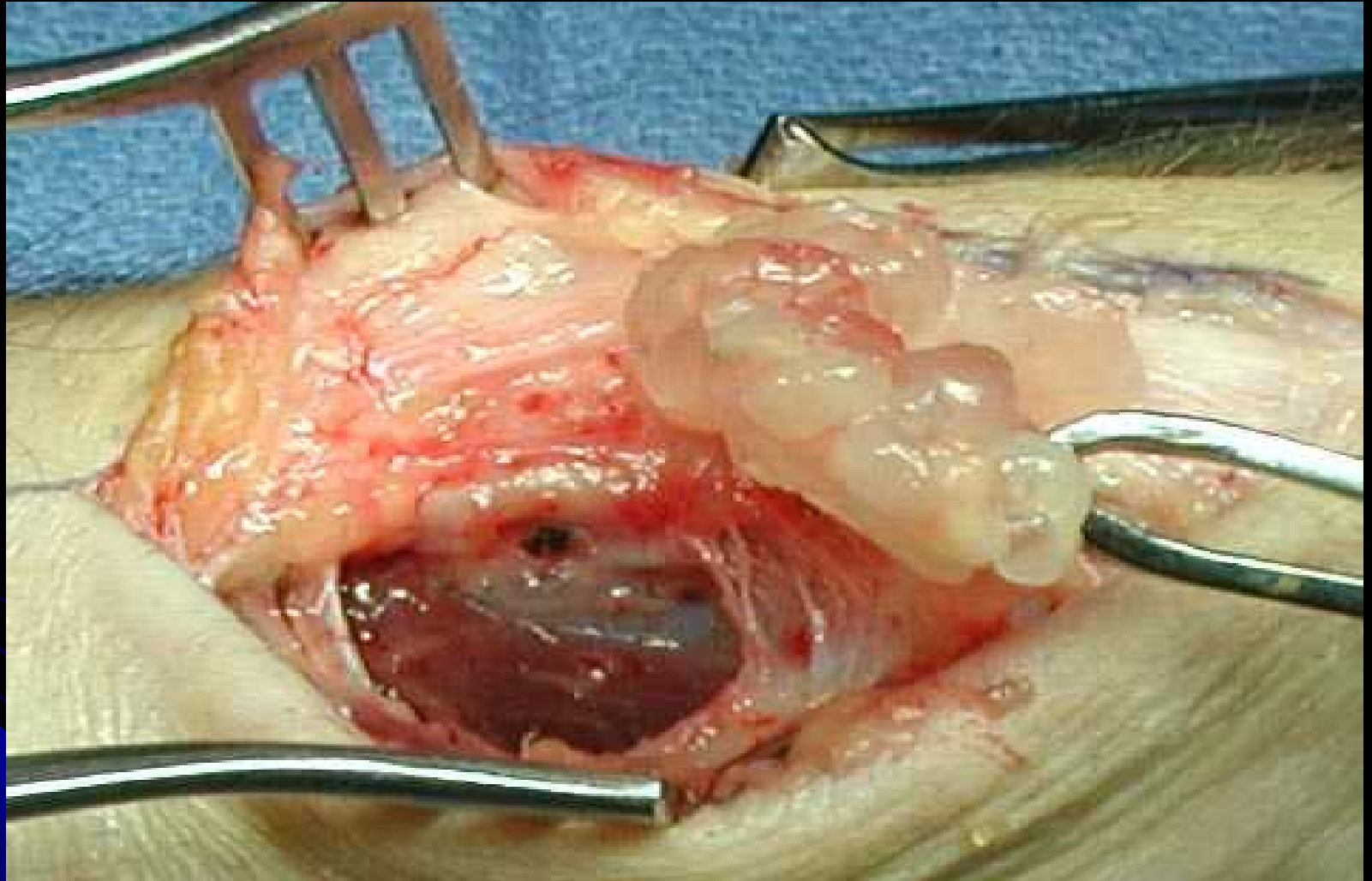
Ganglion Cyst



Γάγγλια

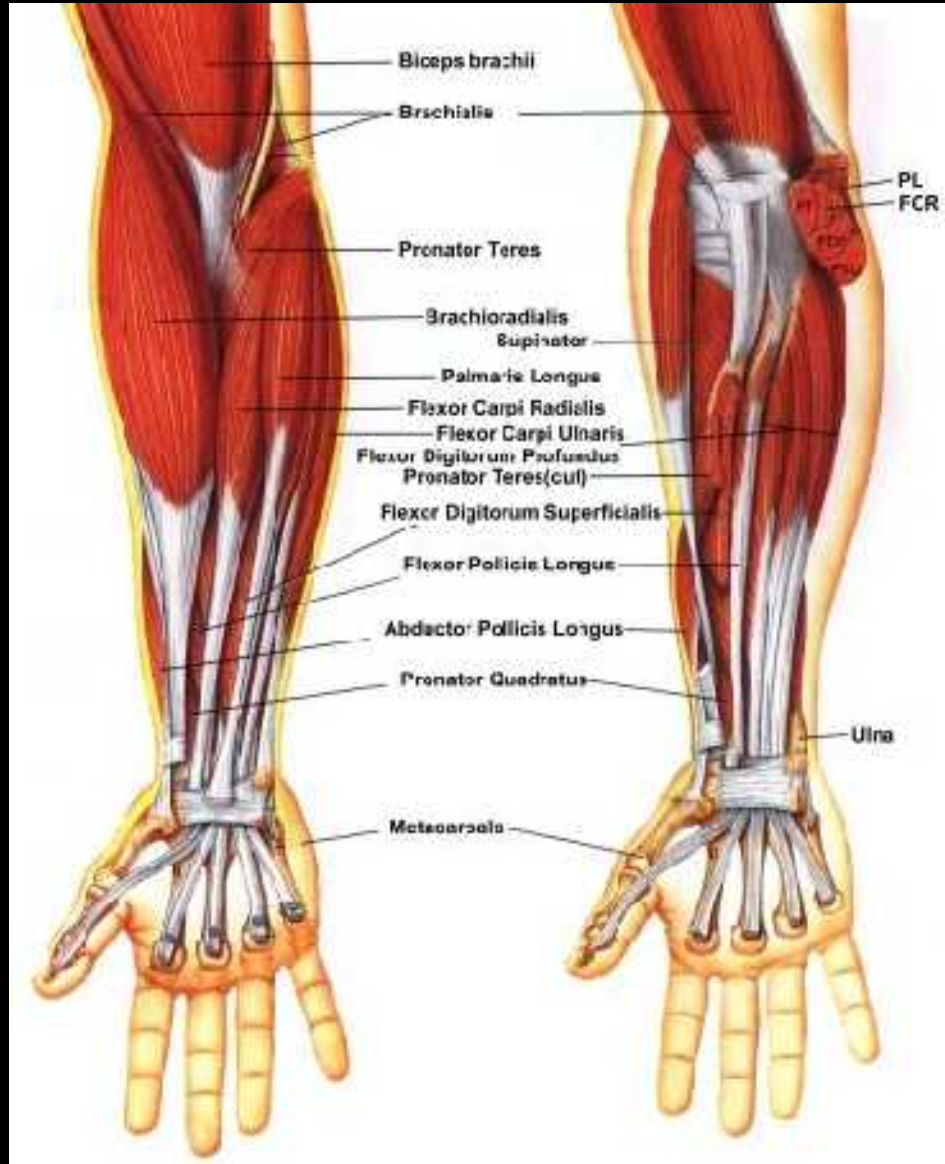


# Γάγγλιο





# Αντιβράχιο



# Κάταγμα Αντιβραχίου

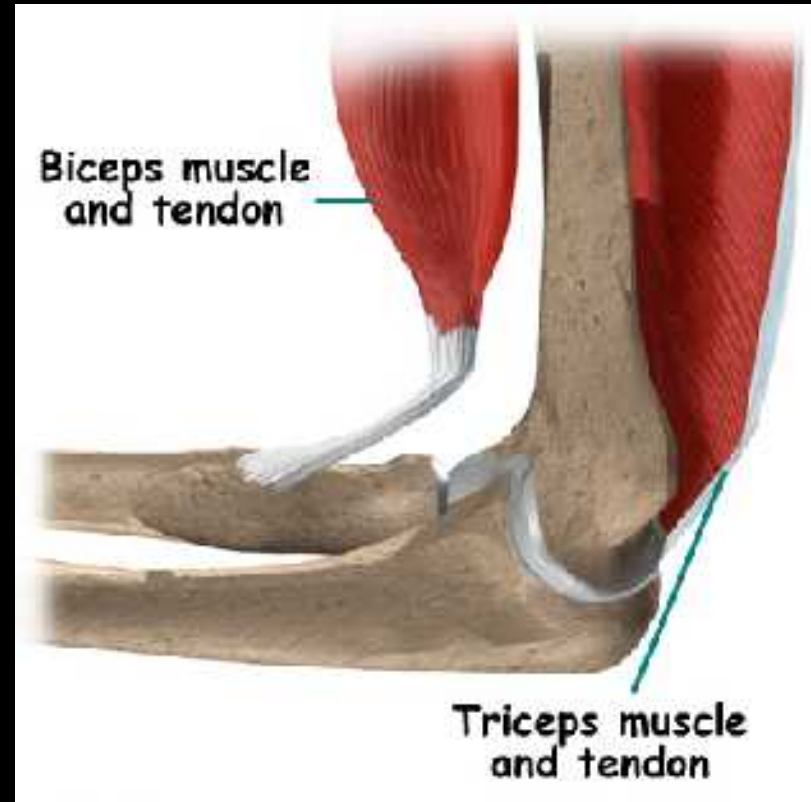
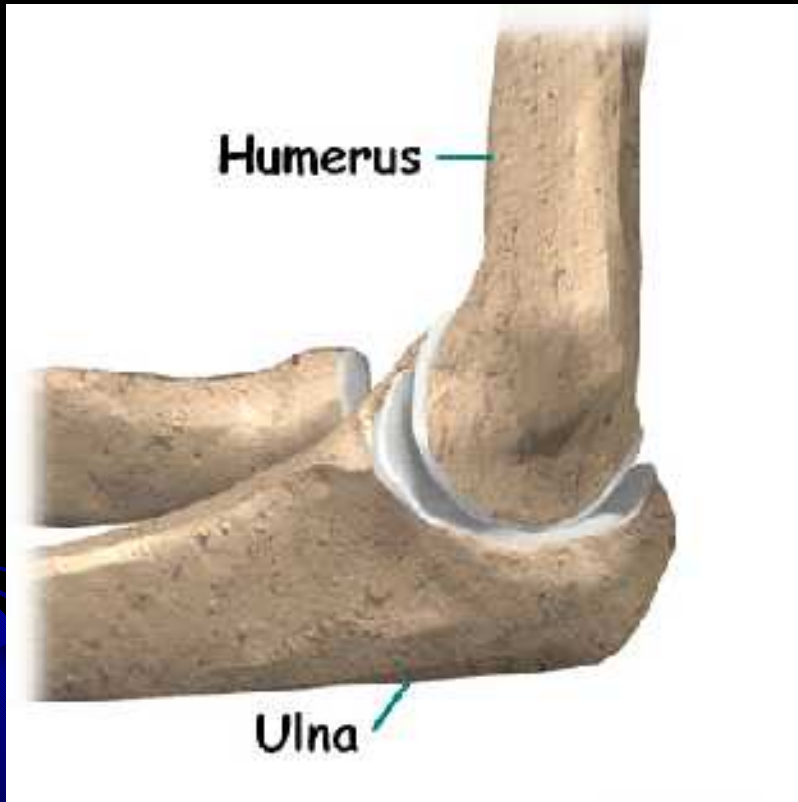


# Κάταγμα Galeazzi

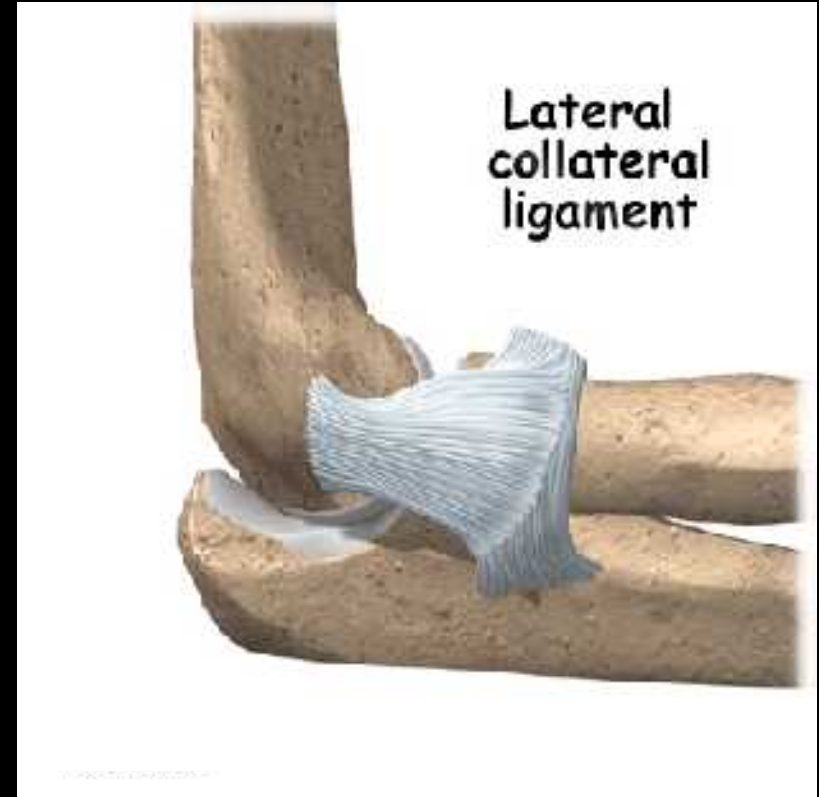




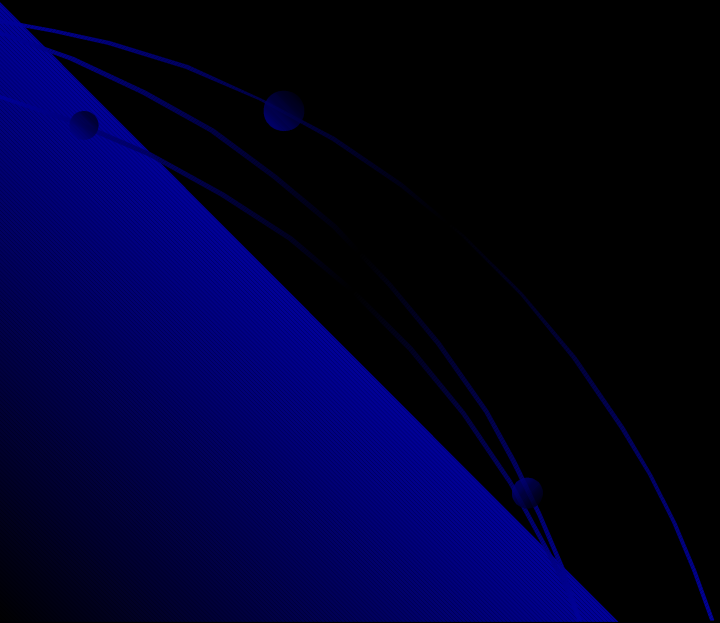
# Αγκώνας



# Αγκώνας



# Εξάρθρωμα Αγκώνα



# Κυτταρίτιδα





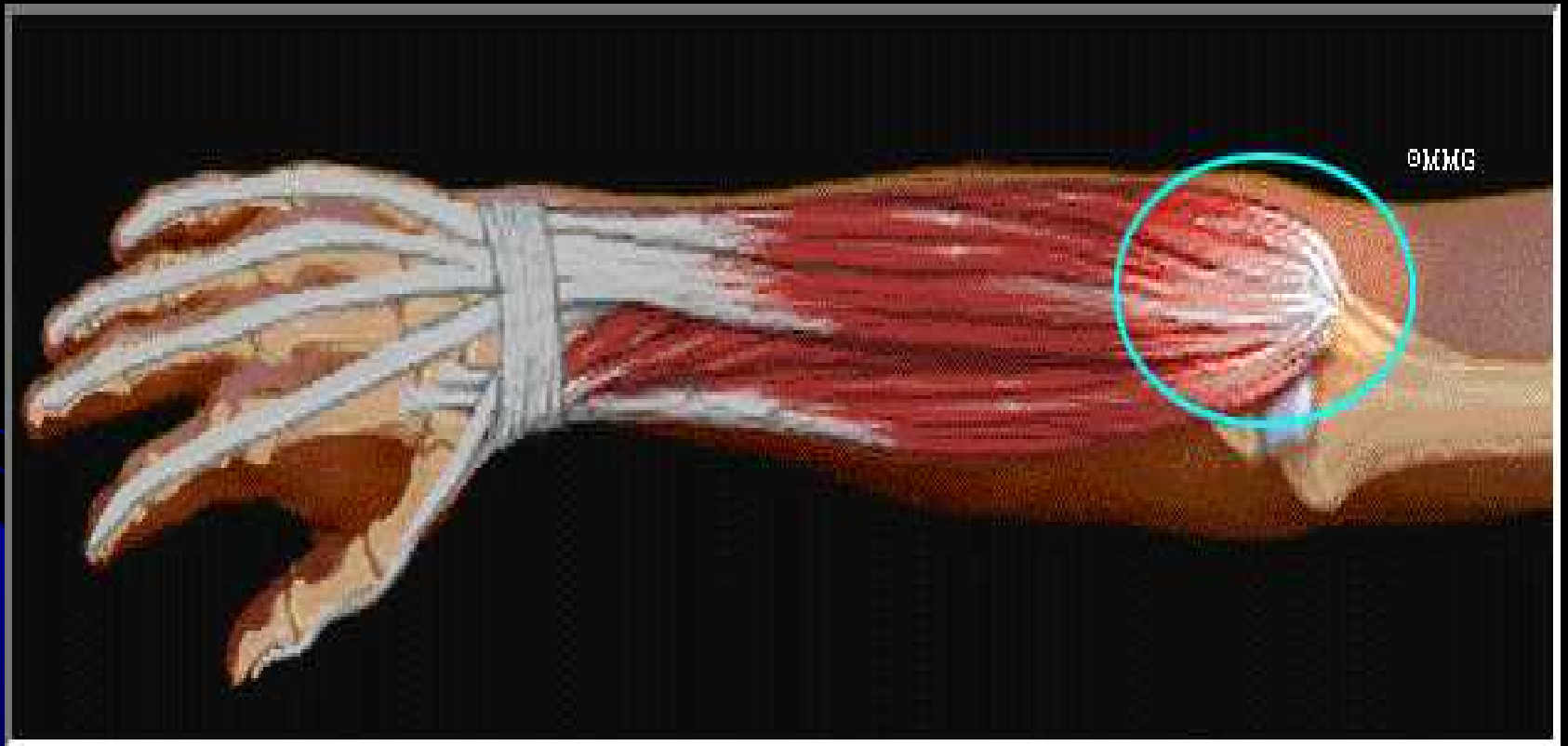
# Distal Biceps Tendon Rupture

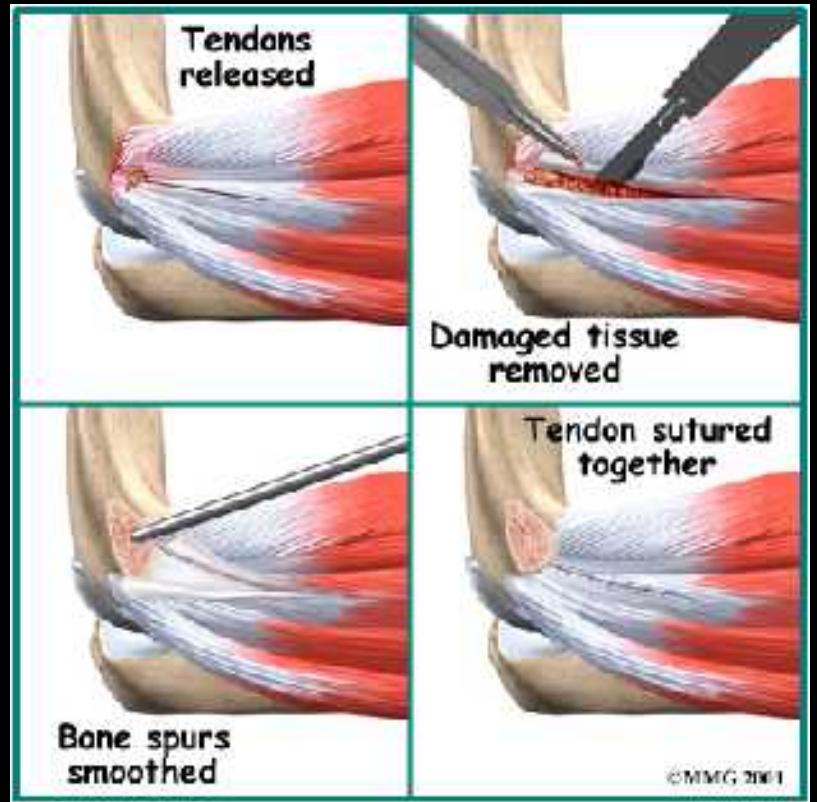
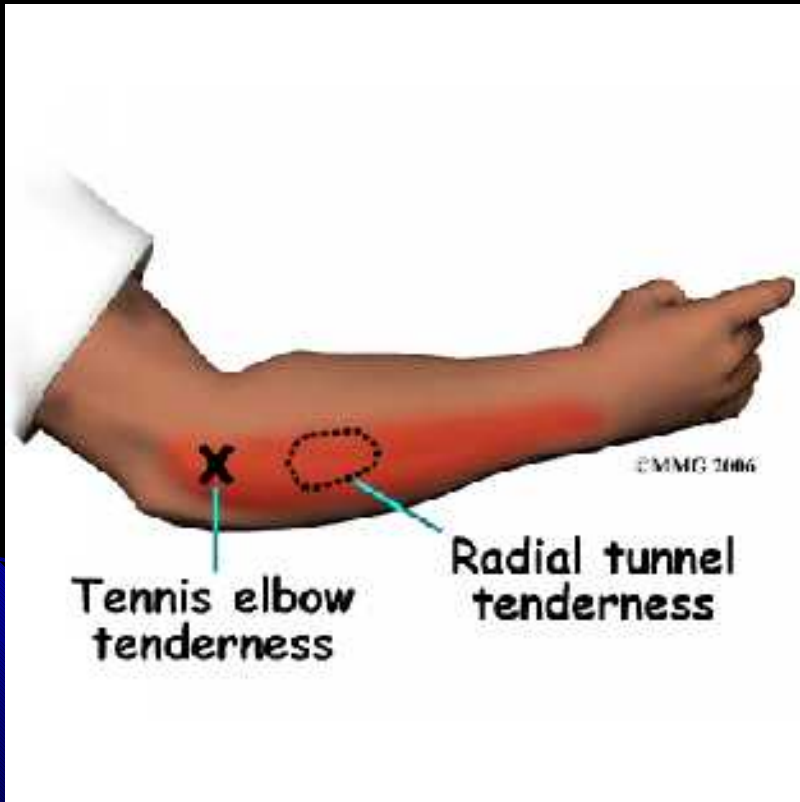






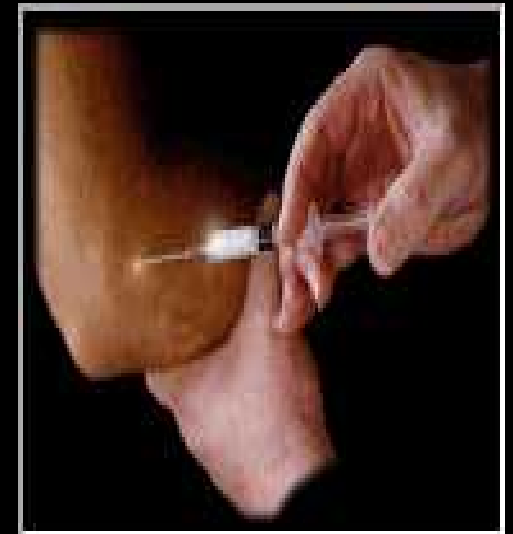
# Επικονδυλίτιδα (Αγκώνας του Τένις)



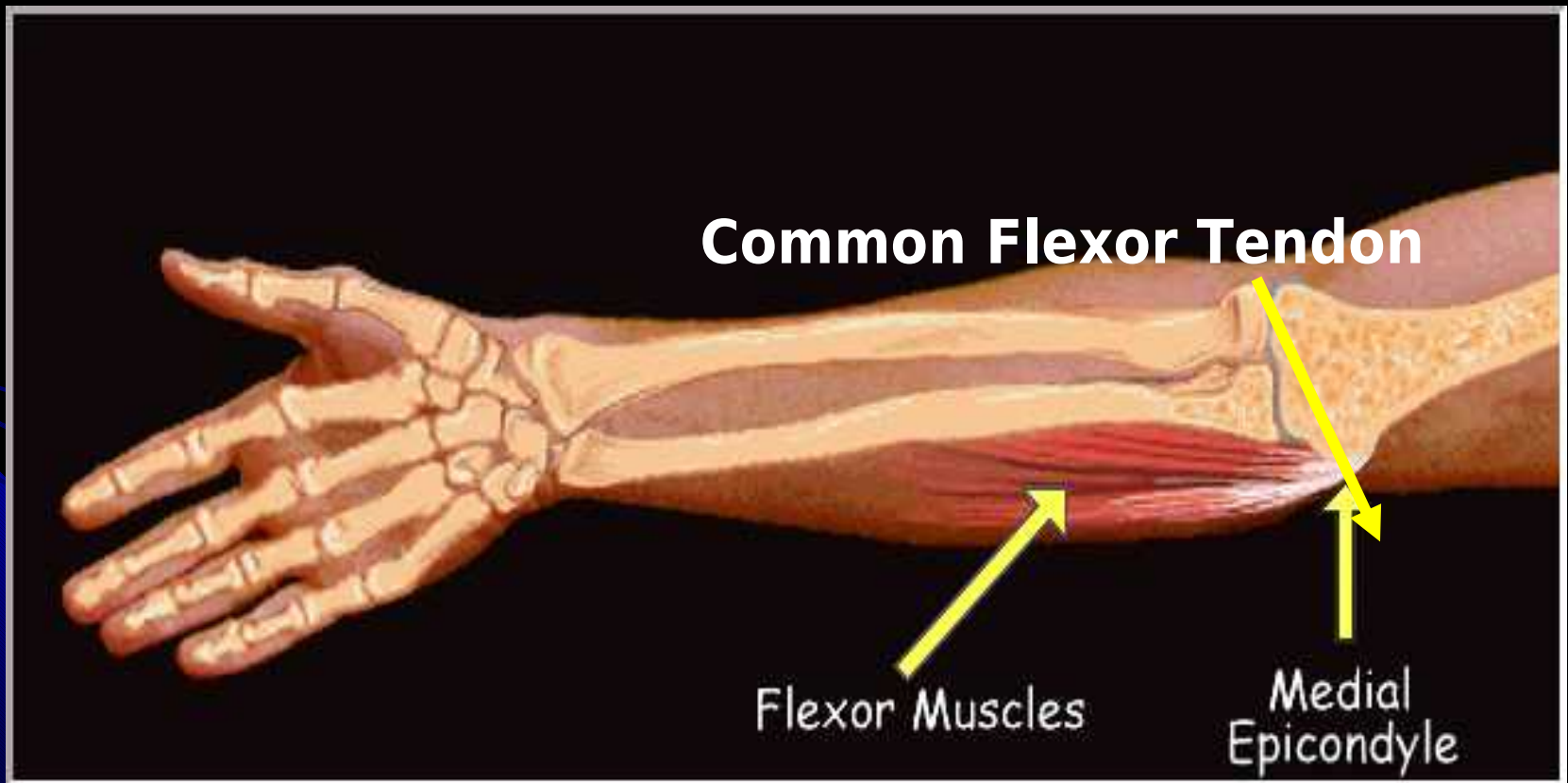


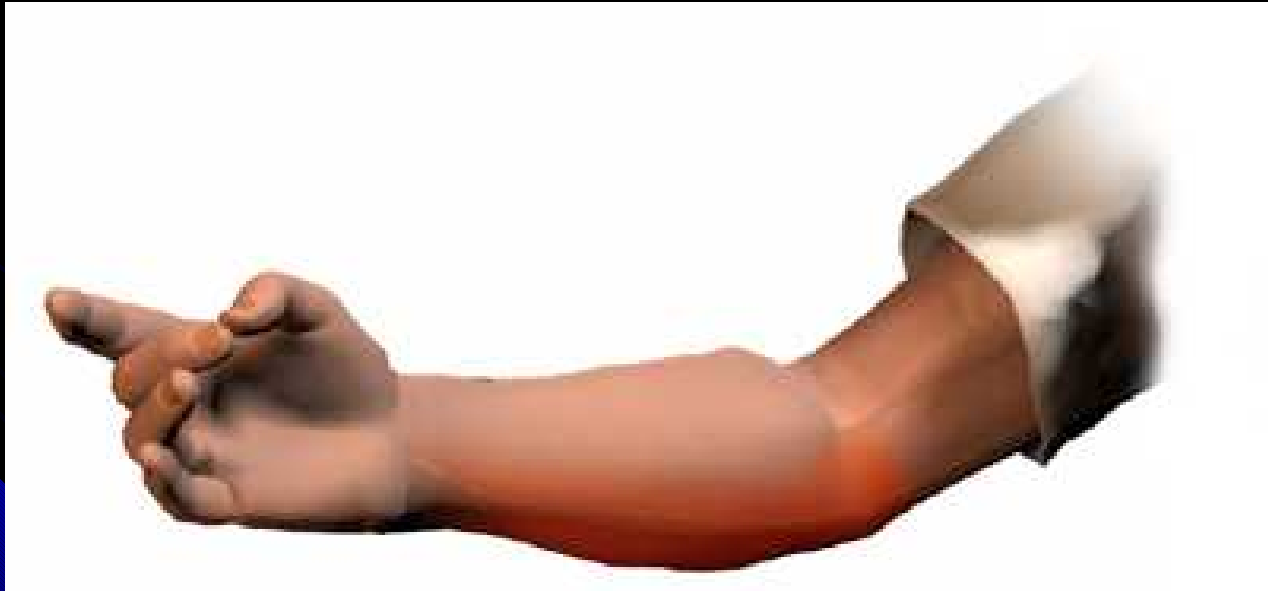
# Επικονδυλίτιδα (Αγκώνας του Τένις)

- Πάγος
- Ανάπαυση
- Ορθωτικά
- Διατάξεις
- Αντιφλεγμονώδη
- Τοπική έγχυση



# Επικονδυλίτιδα (Αγκώνας του Γκόλφ)

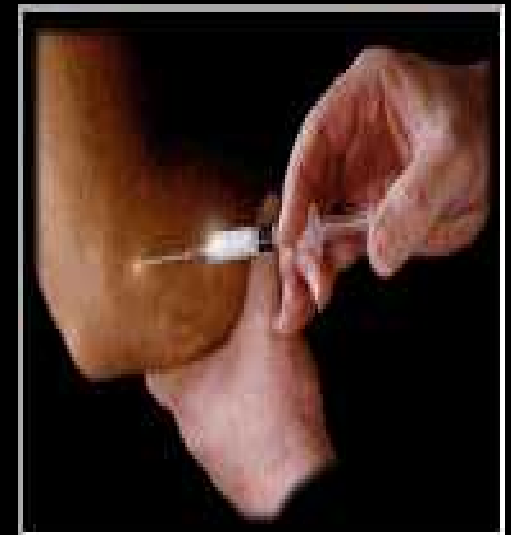






# Επικονδυλίτιδα (Αγκώνας του Γκόλφ)

- Πάγος
- Ανάπαυση
- Ορθωτικά
- Διατάξεις
- Αντιφλεγμονώδη
- Τοπική έγχυση



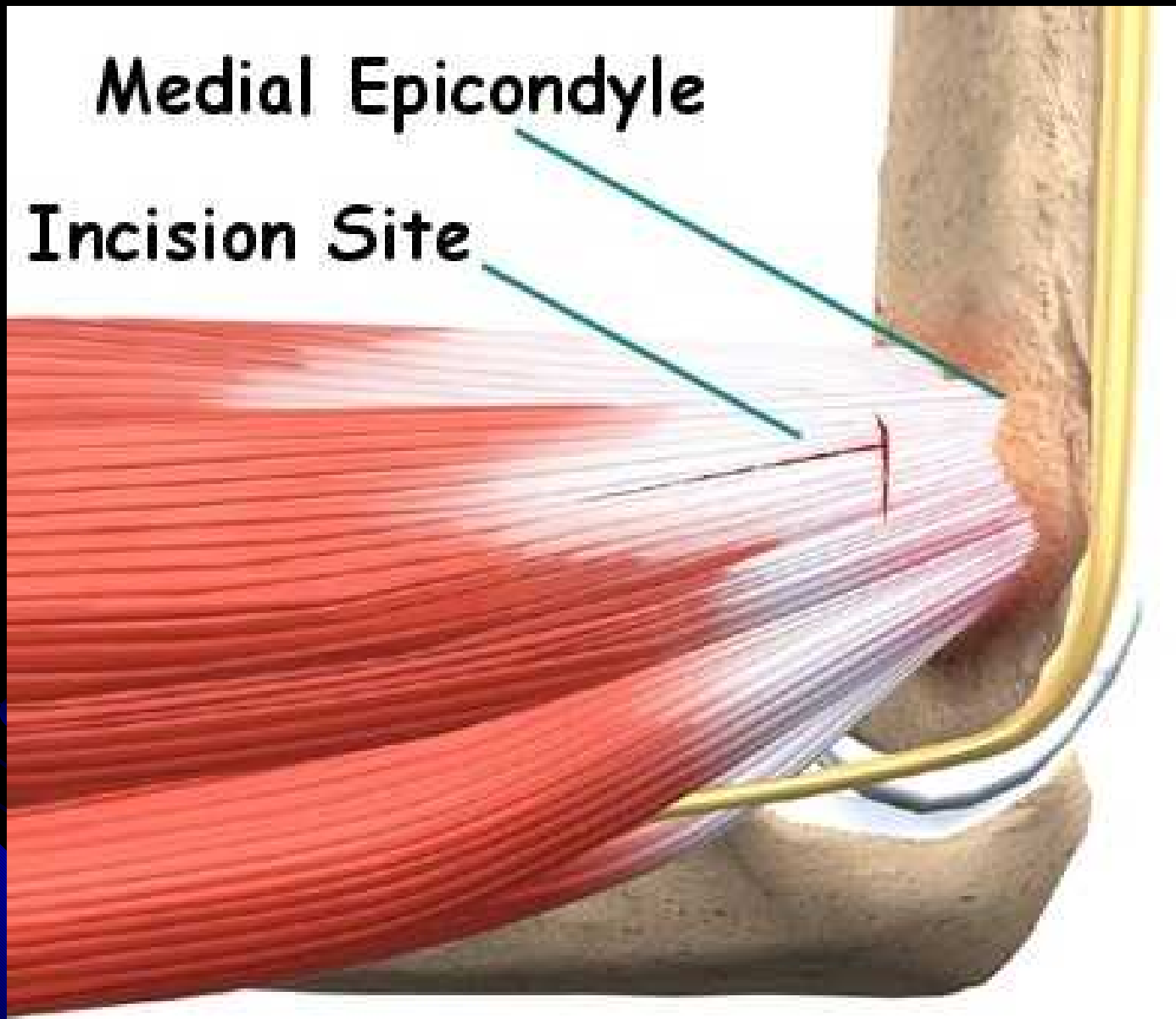
# Επικονδυλίτιδα (Αγκώνας του Γκόλφ)

- Χειρουργική επέμβαση:
  - Όταν όλα αποτύχουν



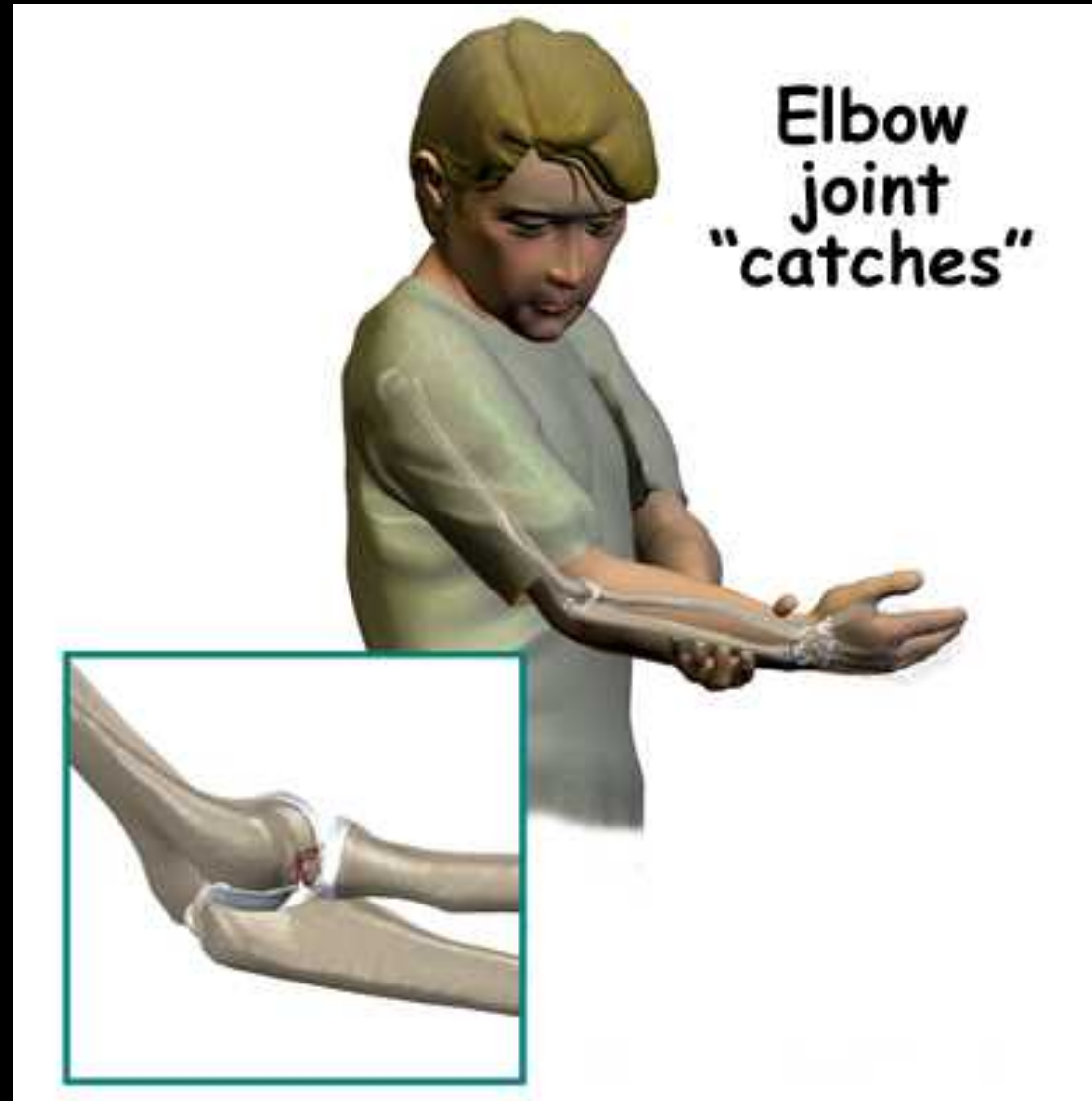
**Medial Epicondyle**

**Incision Site**

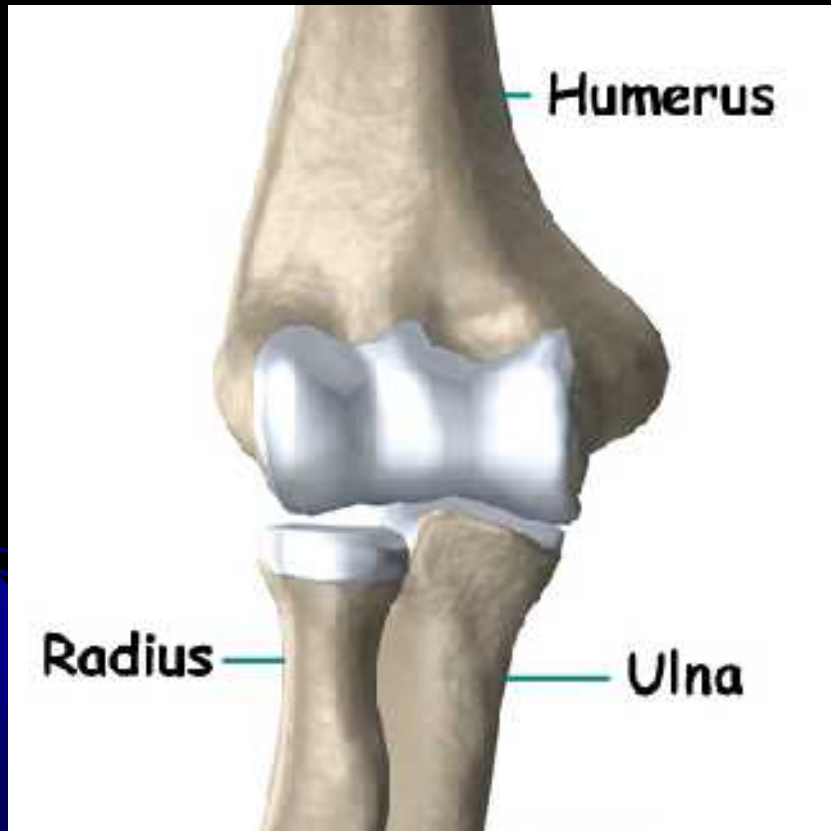


# Διαχωριστική Οστεοχονδρίτιδα Αγκώνα

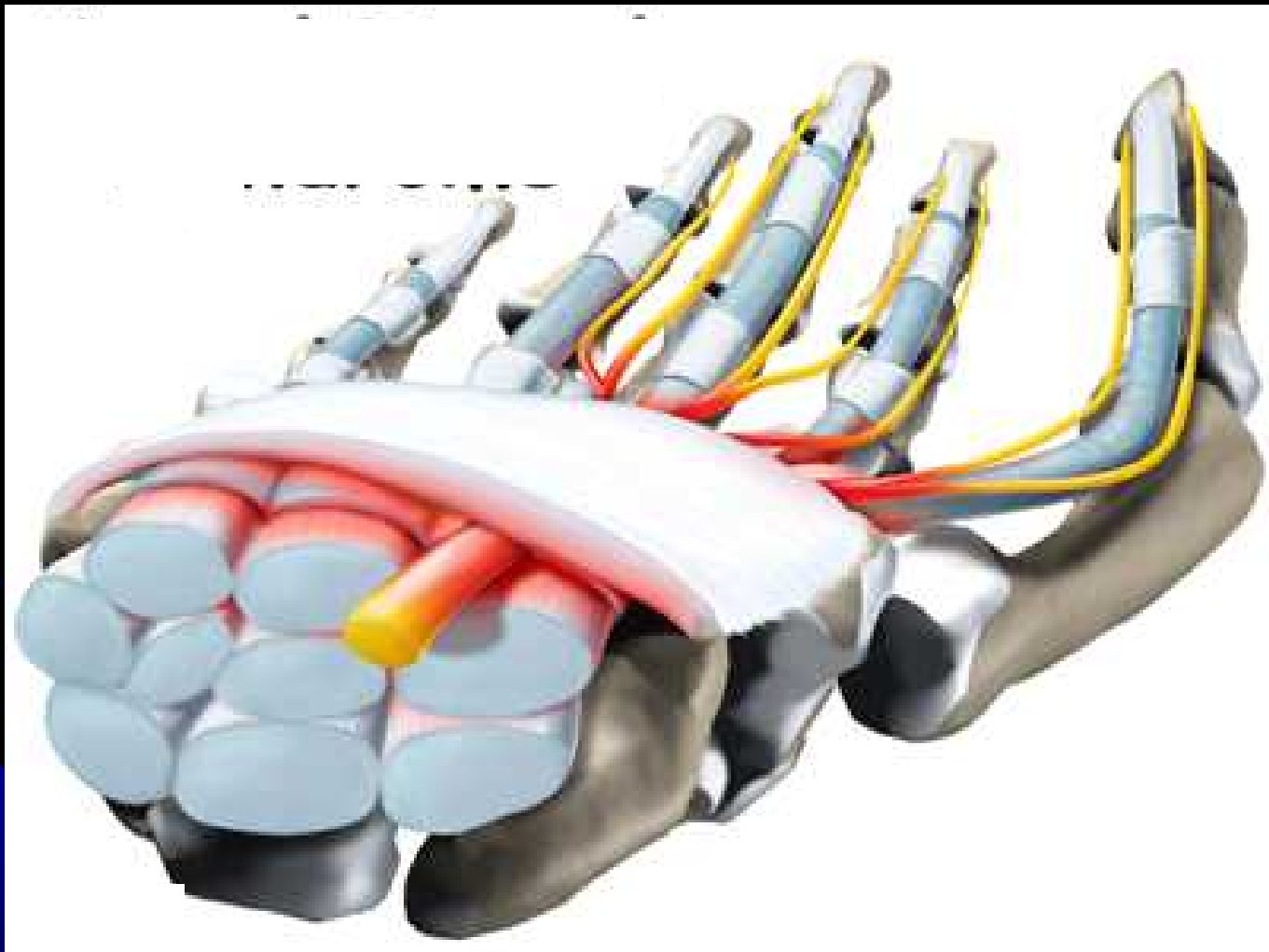
- Συνήθως έξω
- Άσηπτη νέκρωση
- Ανάπαυση, χειρουργική θεραπεία



# Διαχωριστική Οστεοχονδρίτιδα Αγκώνα



# Σύνδρομο Καρπιαίου Σωλήνα



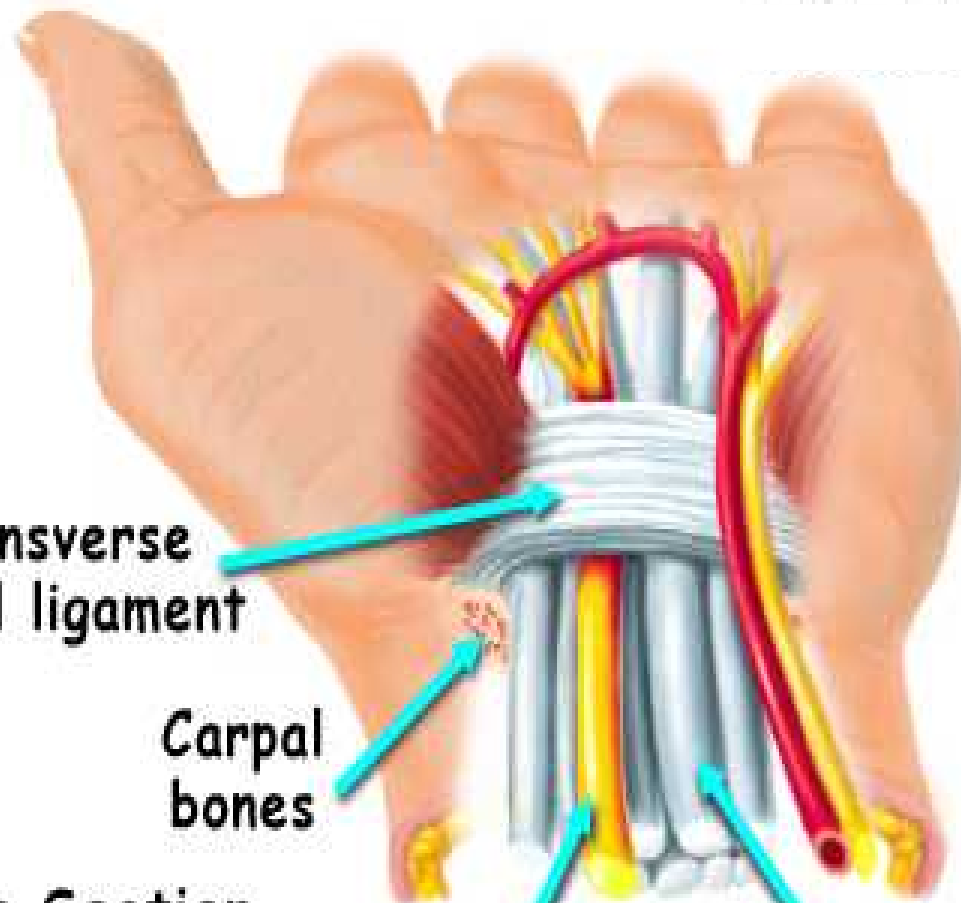
**Transverse  
carpal ligament**

**Carpal  
bones**

**Cross Section  
Carpal Tunnel**

**Median  
nerve**

**Flexor  
tendons**



**Numbness**

**Pain**



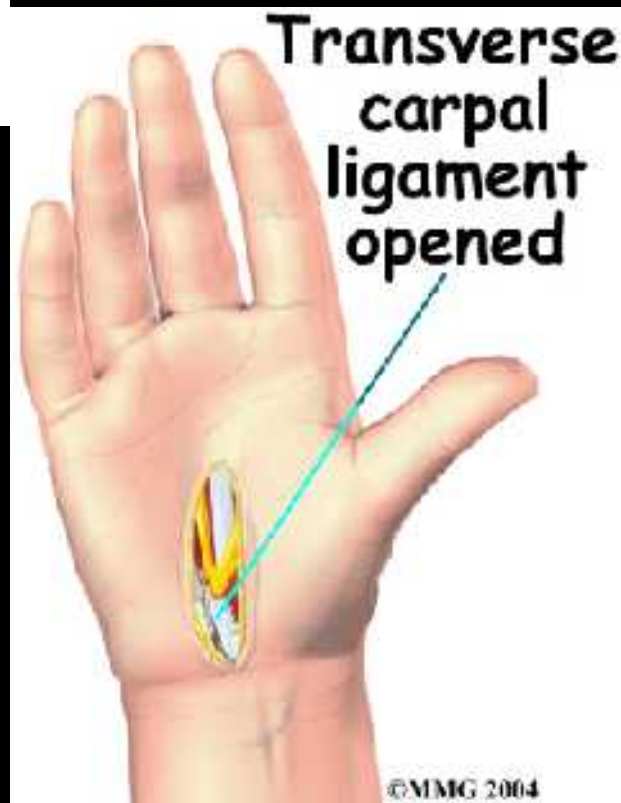


# Cortisone injection

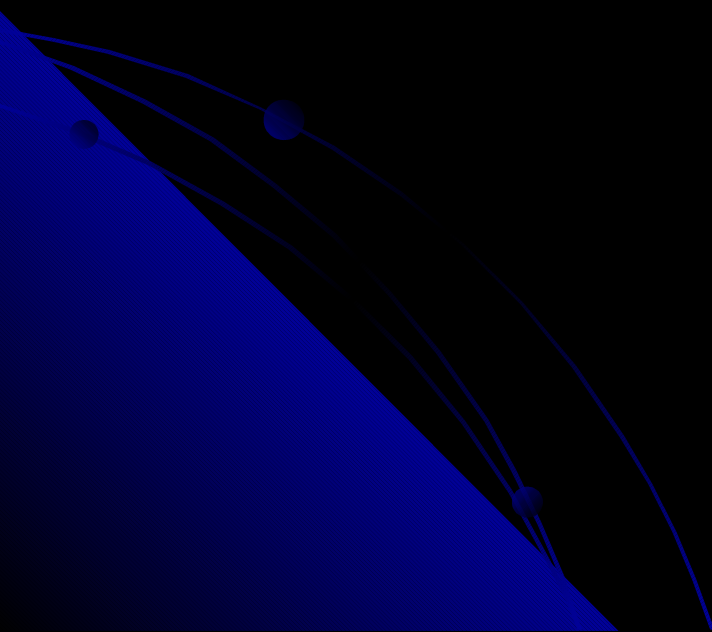


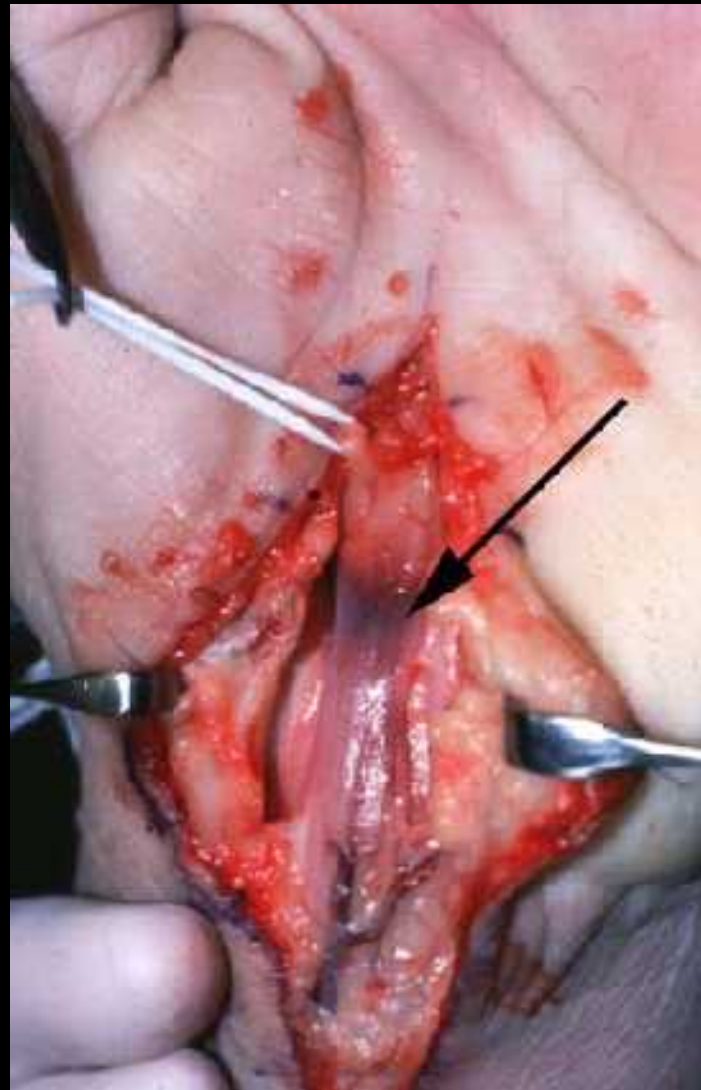
©MMG 2004

# Transverse carpal ligament opened

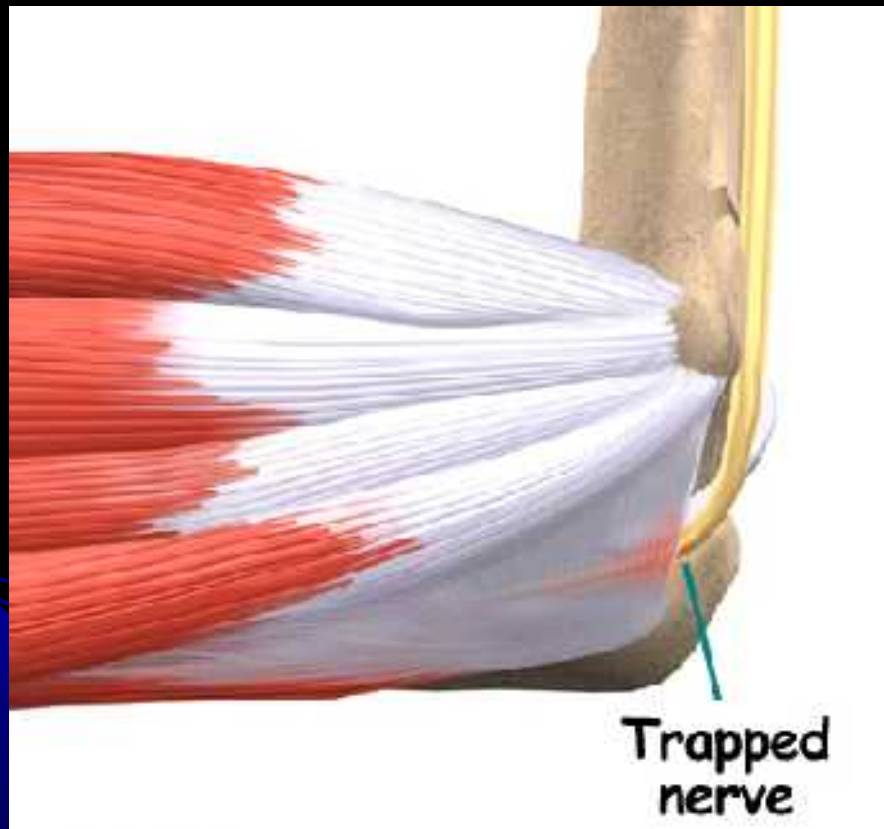


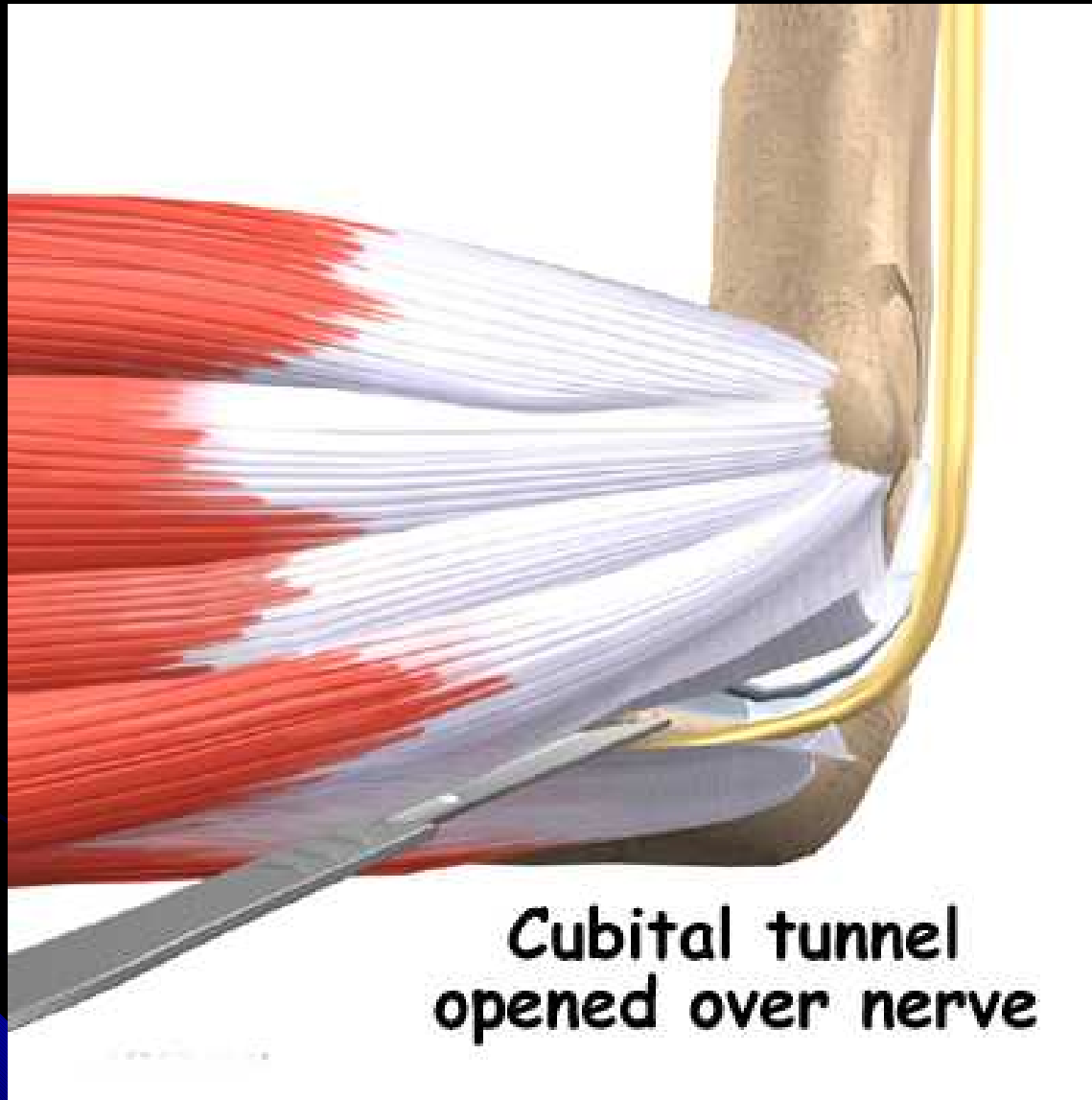
©MMG 2004





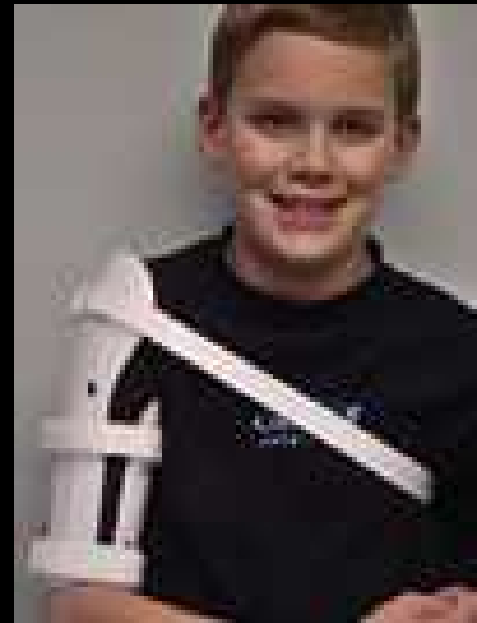
# Παγίδευση Ωλένιου Νεύρου στον Αγκώνα





**Cubital tunnel  
opened over nerve**



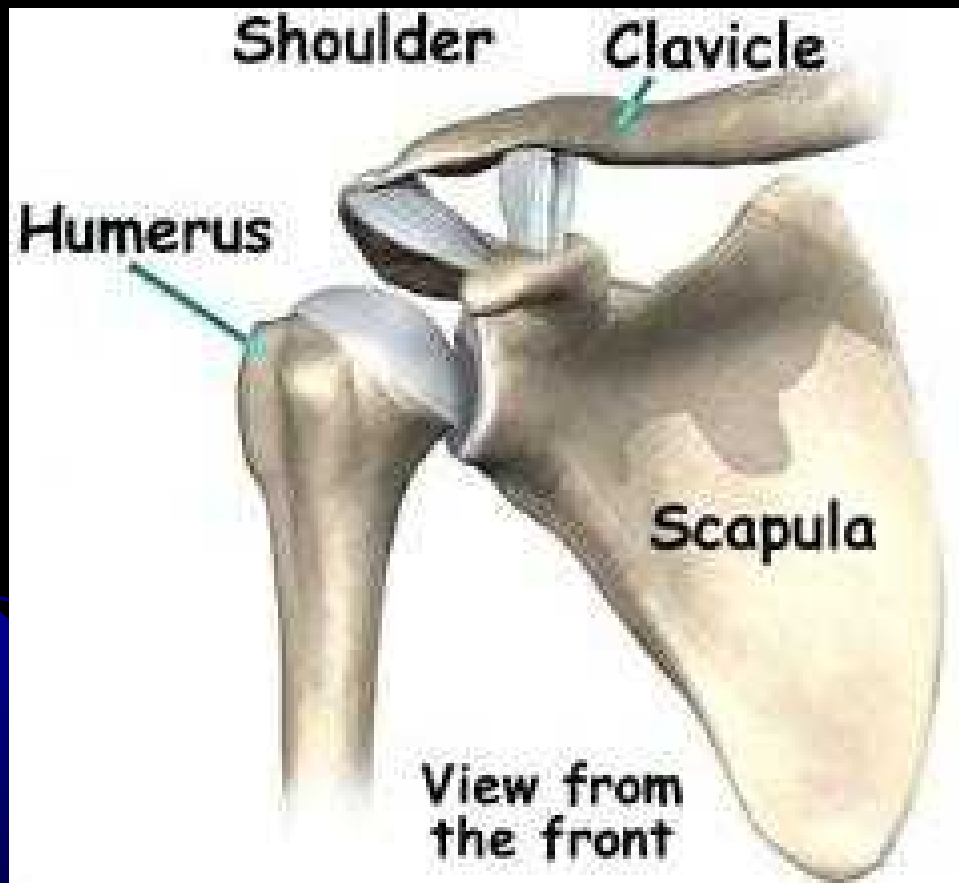


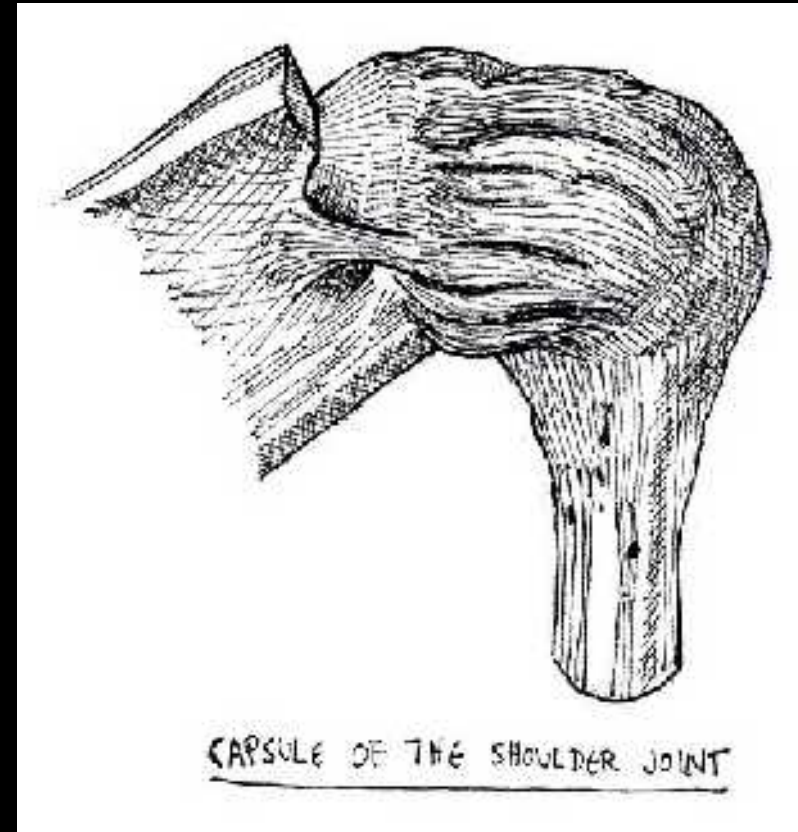


# Όμος









Anterior view of the left shoulder; arm abducted 45 degrees. This is a much more advanced dissection of the same cadaver in previous images. Note:

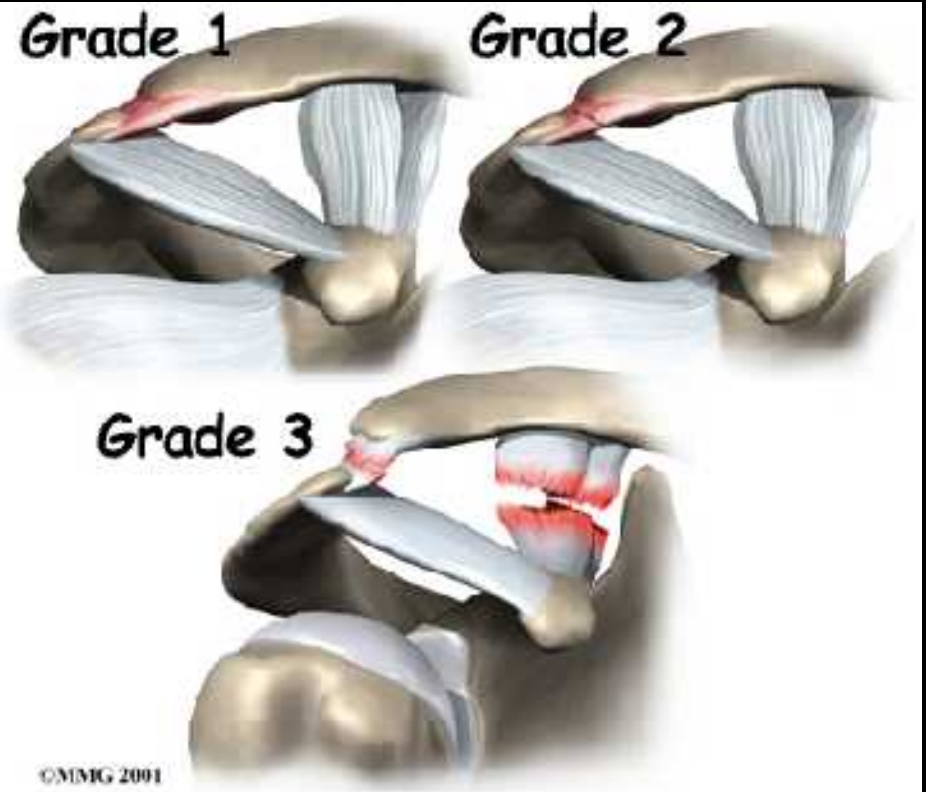
- 1) Orient yourself to the dissection.
- 2) The cord-like tendon of the long head of the biceps brachii exiting the shoulder joint.
- 3) The transverse humeral ligament.







## Acromioclavicular Separation



# Πόνος στον Ώμο

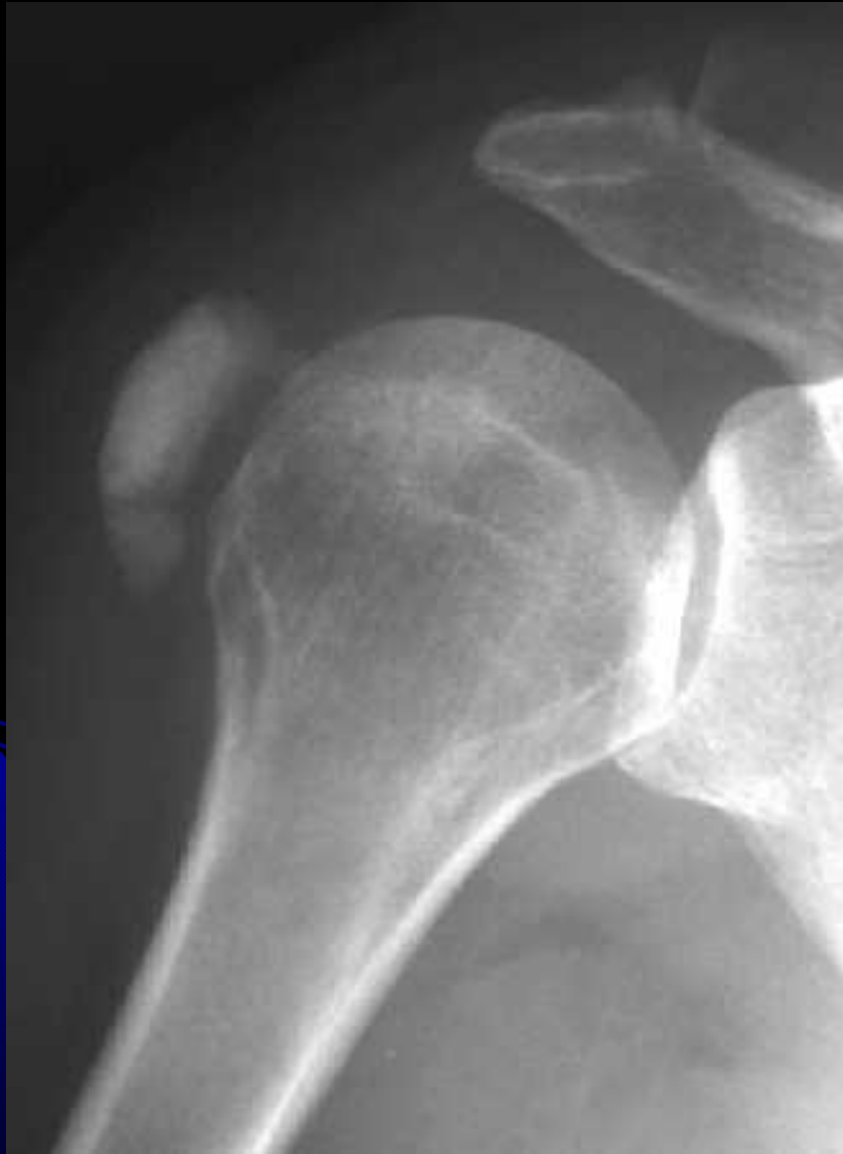


- Σύνδρομο πρόσκρουσης
- Ρήξη τενοντίου πετάλου
- Εξάρθρωμα ώμου
- Ασβεστοποιός τενοντίτιδα
- Αρθρίτιδα ΑΚΑ-ΓΒΑ

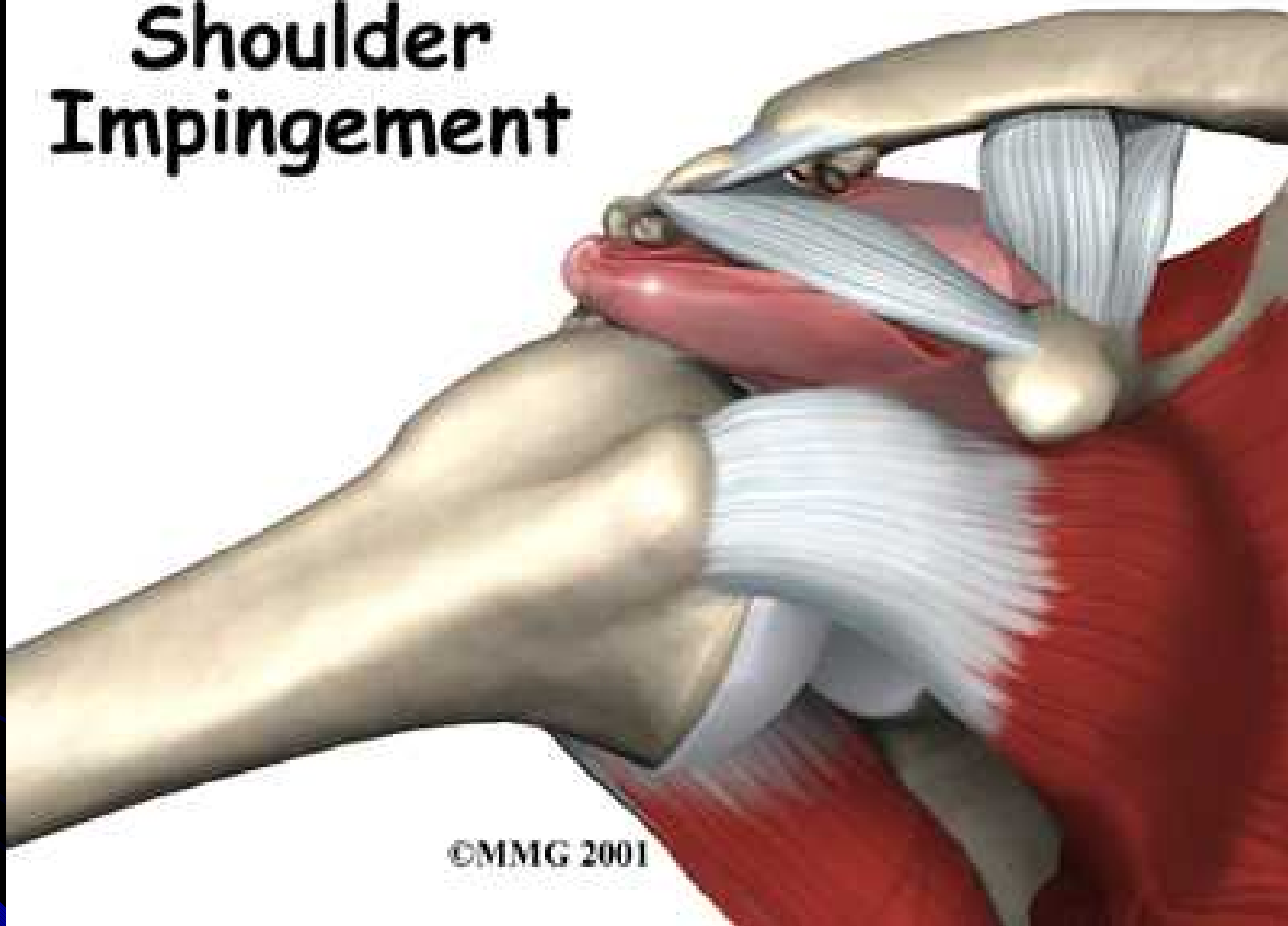
## Adhesive Capsulitis







# Shoulder Impingement



©MMG 2001

# Σύνδρομο Πρόσκρουσης



- Πρωτογενής πρόσκρουση
- Δευτερογενής πρόσκρουση
- Δευτερογενής πρόσκρουση επιγενείς αλλοιώσεις υπακρωμιακού χώρου
- Οπίσθια εσωτερική πρόσκρουση
- Πρόσθια εσωτερική πρόσκρουση
- Πρόσκρουση κορακοειδους

## Πρωτογενές Σύνδρομο Πρόσκρουσης

- Μορφολογία ακρωμίου
- Αρθρίτιδα ΑΚΑ
- Υπερτροφία ΑΚ συνδέσμου
- Πρόσκρουση κορακοειδούς απόφυσης
- Πάχυνση υπακρωμιακού θυλάκου
- Προβολή MBO
- Τραύμα (μείζον ή επαναλαμβανόμενοι μικροτραυματισμοί)
- Δραστηριότητα των άκρων πάνω από το κεφάλι  
(αθλητική και μη αθλητική)



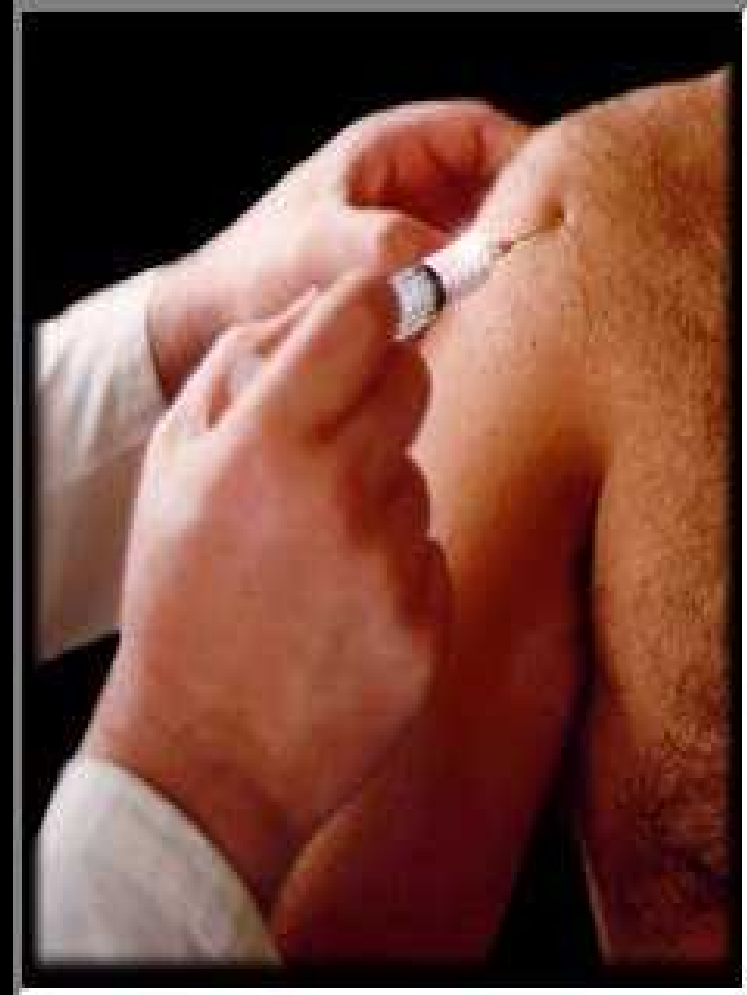
## Δευτερογενές Σύνδρομο Πρόσκρουσης

- Υπερφόρτιση στροφένων- ανισορροπία μαλακών μορίων
- Έκκεντρη καταπόνηση μυών και κόπωση
- Χαλάρωση-αστάθεια γληνοβραχιόνιας άρθρωσης
- Αδυναμία μακράς κεφαλής δικεφάλου
- Βλάβες επιχείλιου χόνδρου
- Δυσκινησία Ωμοπλάτης
- Ρίκνωση οπίσθιου θυλάκου  
(παρεκτόπιση της κεφαλής προς τα πάνω)
- Παράλυση τραπεζοειδούς μυός

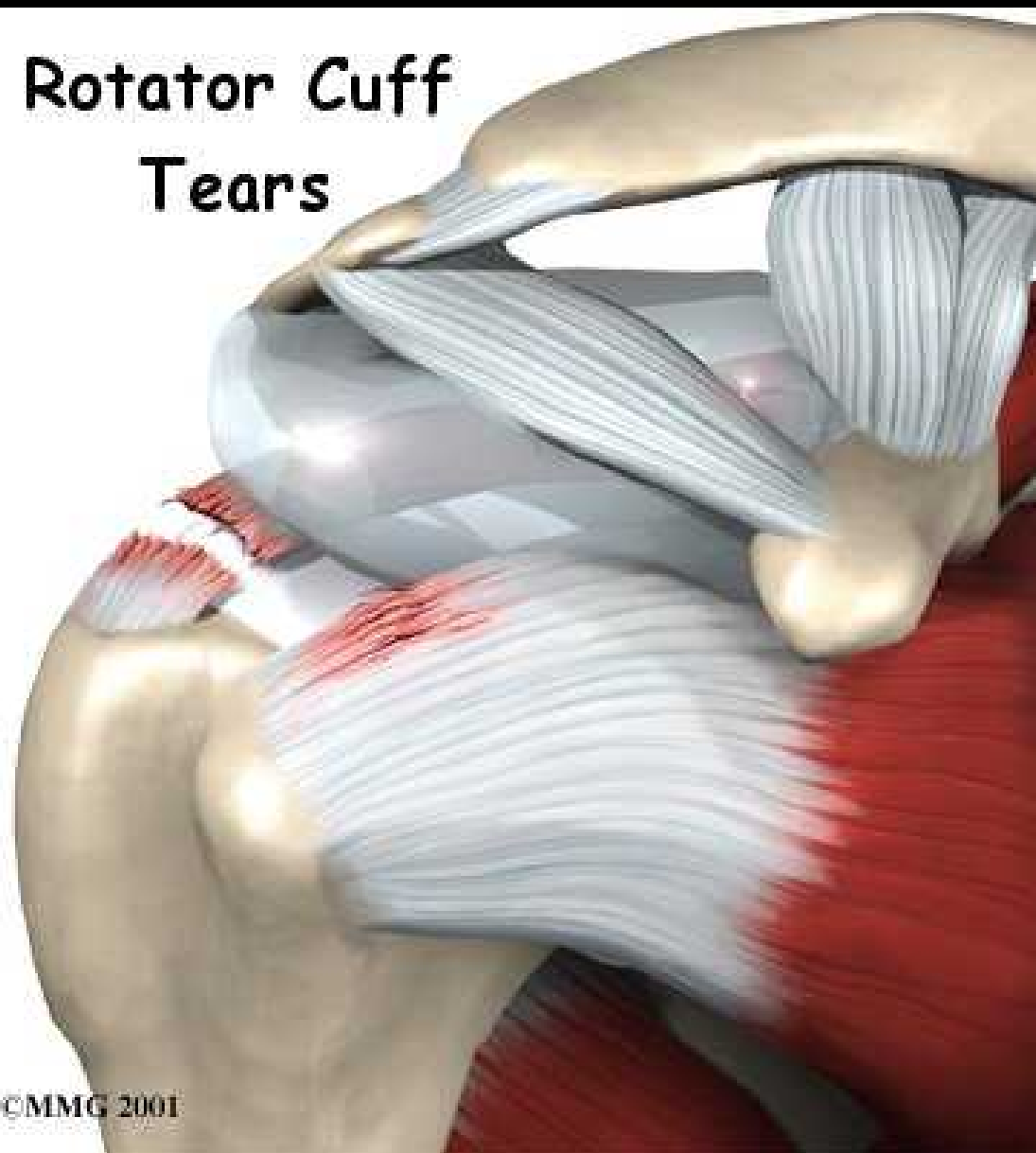


# Τενοντίτιδα του Τενοντίου Πετάλου

- Ανάπαυση
  - Αντιφλεγμονώδη
  - Φυσικοθεραπεία
  - Κορτιζόνη
- 
- Μερικές ρήξεις μπορεί να είναι ασυμπτωματικές
  - Οι πλήρεις ρήξεις δεν επουλώνονται



# Rotator Cuff Tears



©MMG 2001



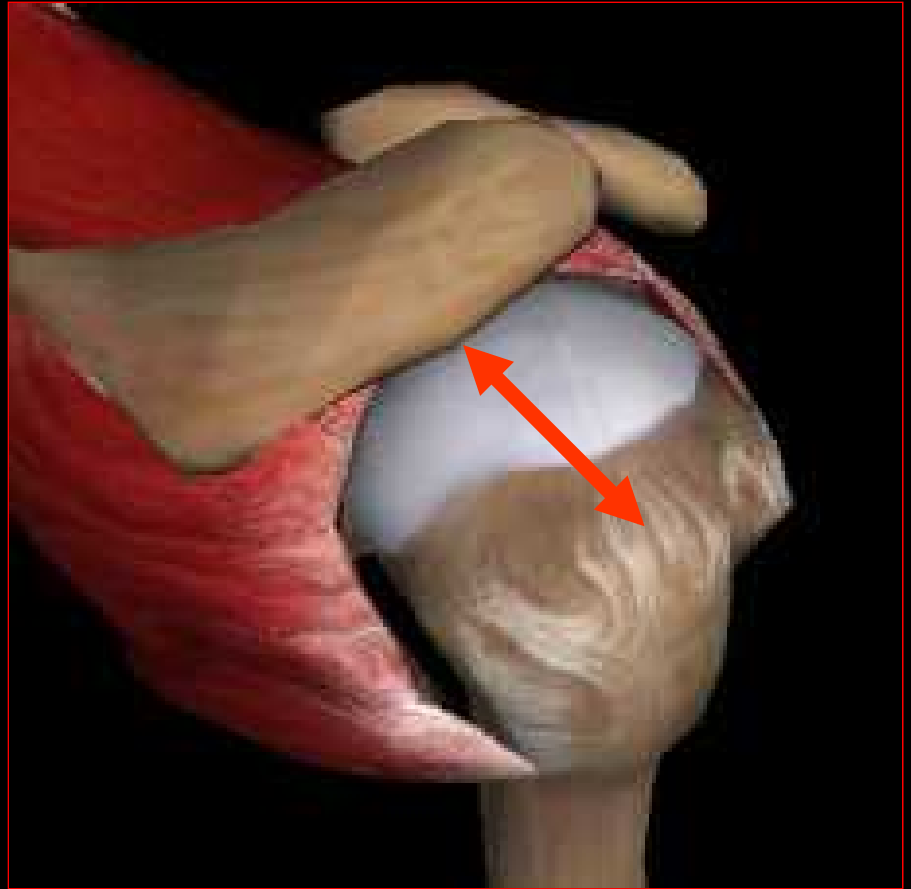
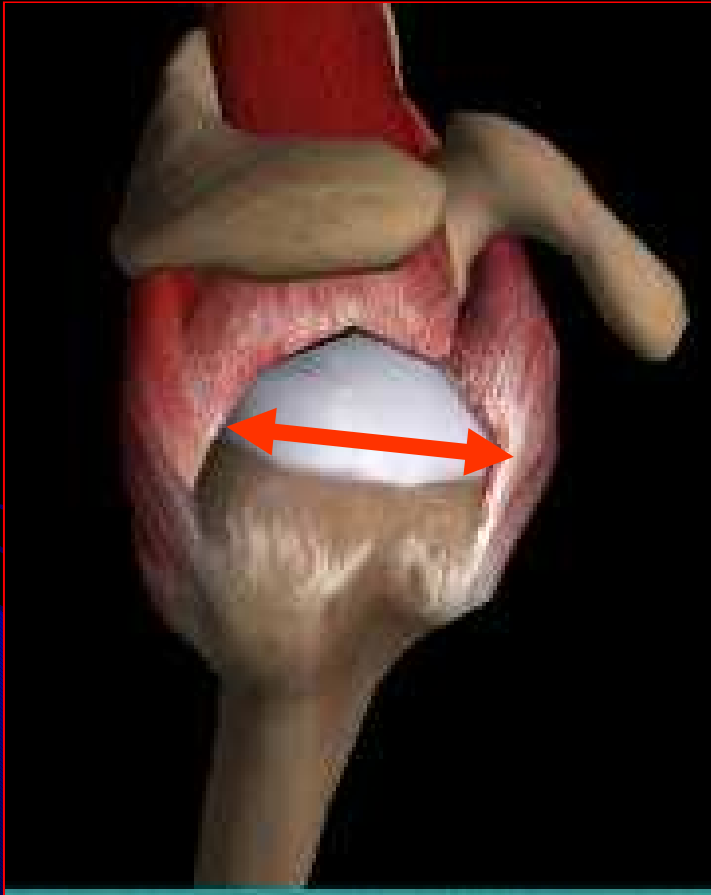
Οι ρήξεις του τενοντίου πετάλου διαγιγνώσκονται:

1. Κλινικά

2. Με απεικονιστικό έλεγχο

Υπερηχογράφημα - Μαγνητική Τομογραφία





# Εξάρθρωμα του Ώμου

2% του γενικού πληθυσμού

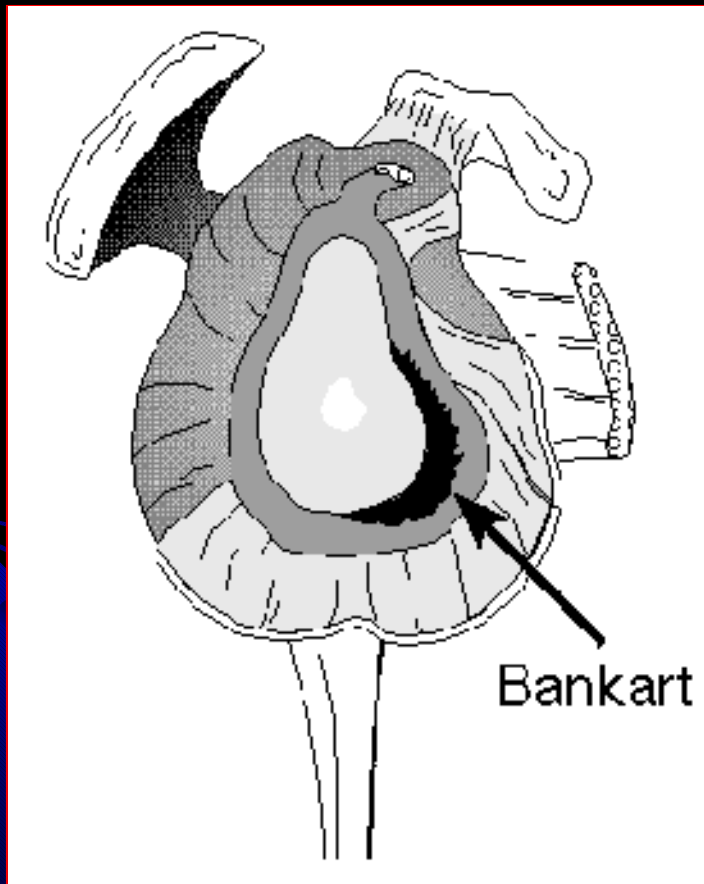
90% πρόσθιο



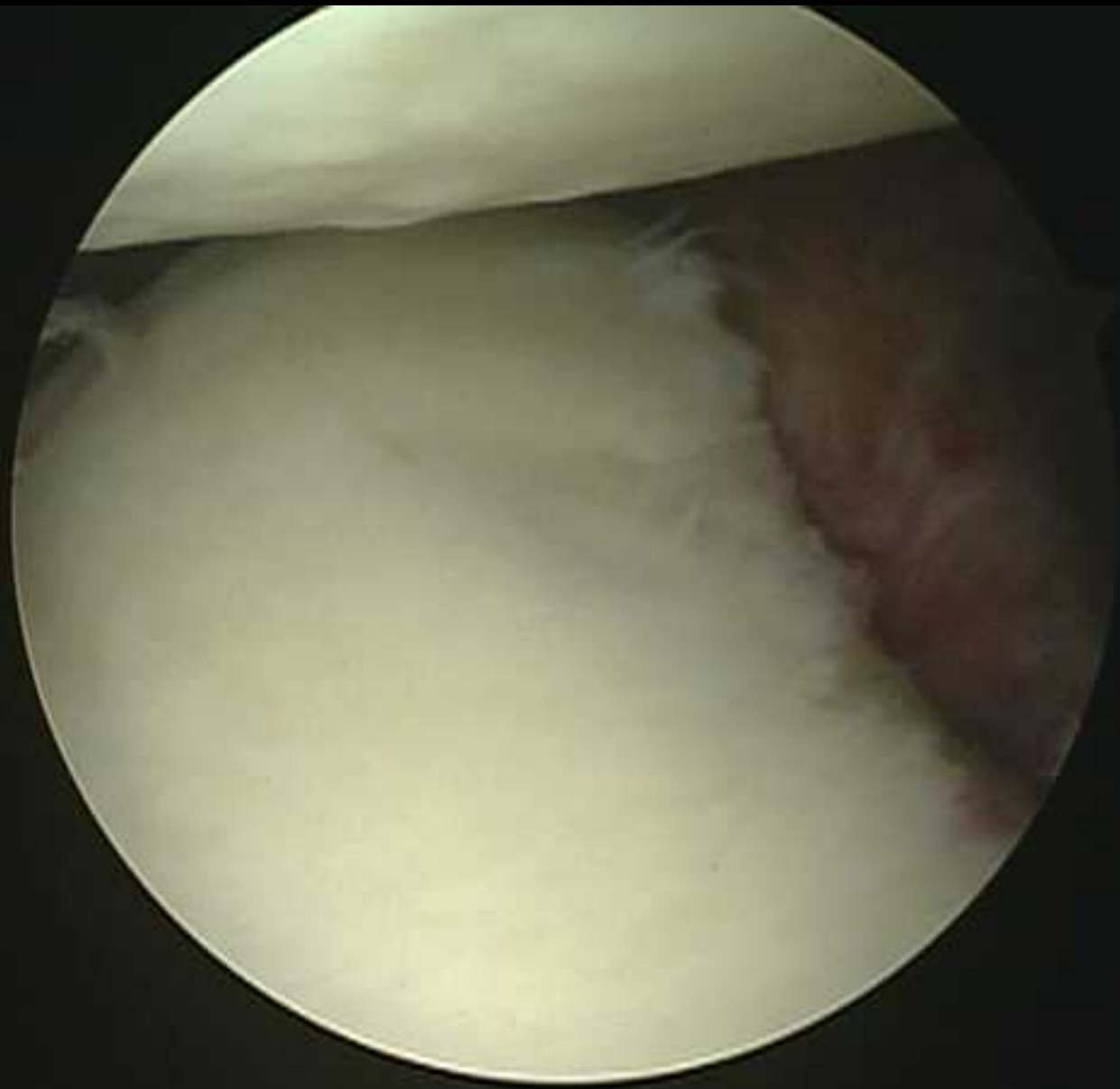
# Πρόσθιο Εξάρθρημα του Ώμου



# Βλάβη Bankart 80 - 90%

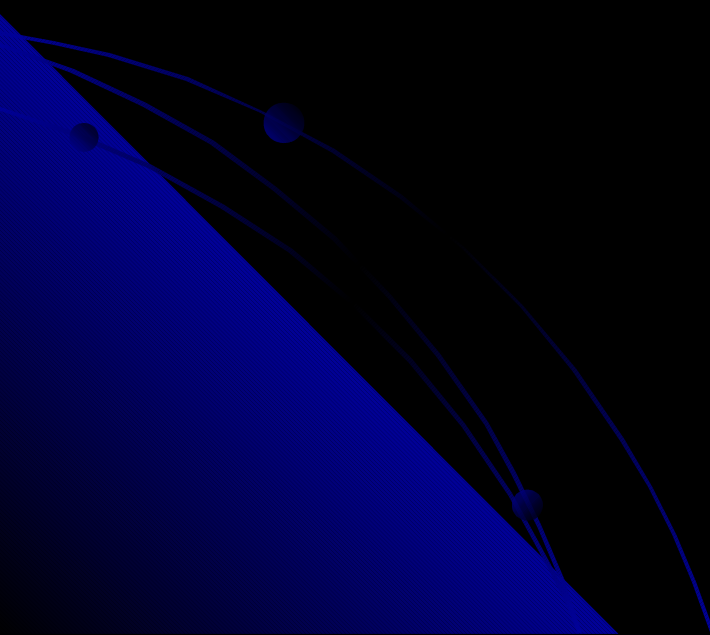


Μαγνητική Τομογραφία



# Υποτροπή Εξαρθρήματος του Ώμου

17% έως 96% (μέσος όρος  
67%)



Ο κυριότερος προγνωστικός παράγοντας υποτροπής είναι η ηλικία

Υποτροπή

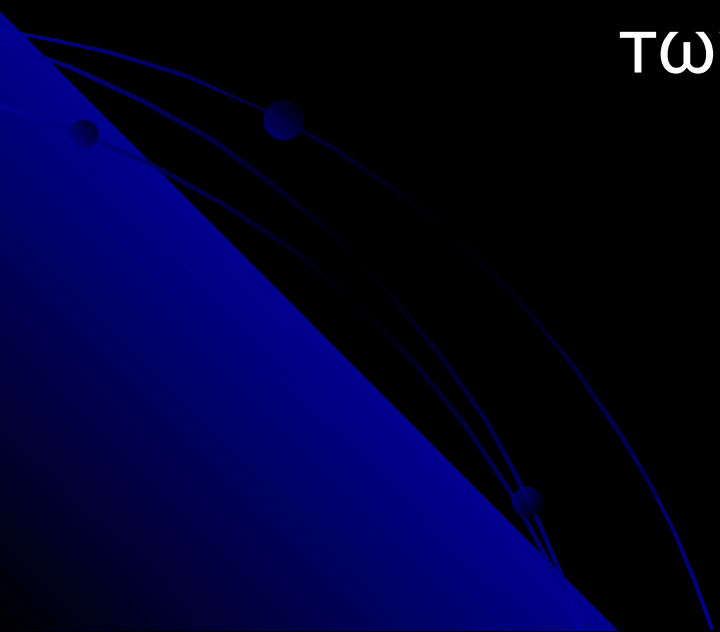
< 20 έτη 64%

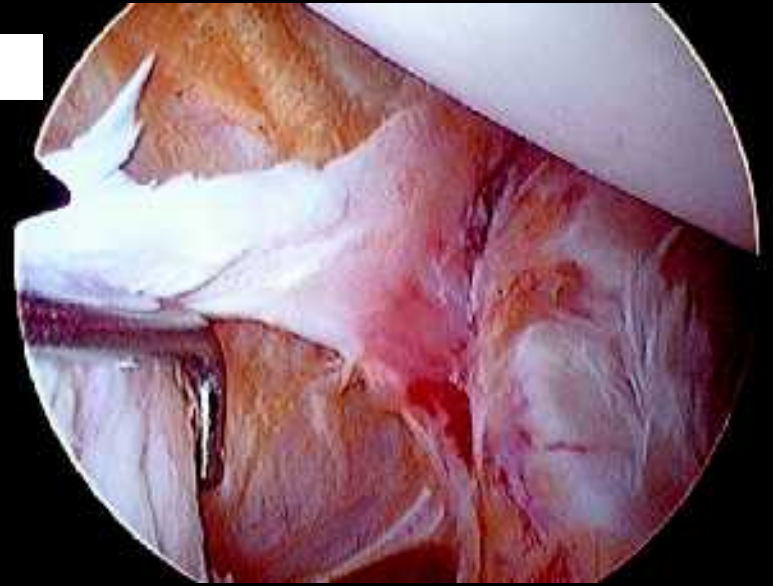
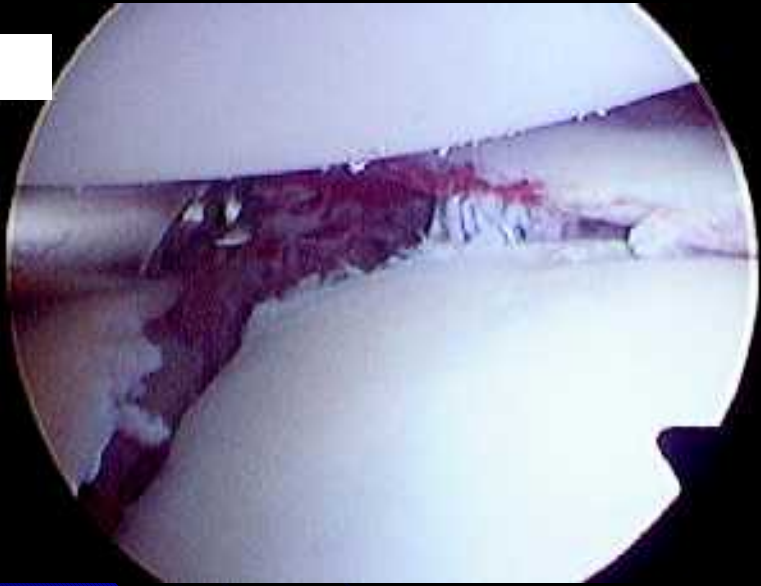
>40 έτη 6%

Slaa, JBJS 2004



Η βαρύτητα των δευτερογενών  
βλαβών μετά από εξάρθρωμα του  
ώμου αυξάνει ανάλογα με τον αριθμό  
των εξαρτημάτων





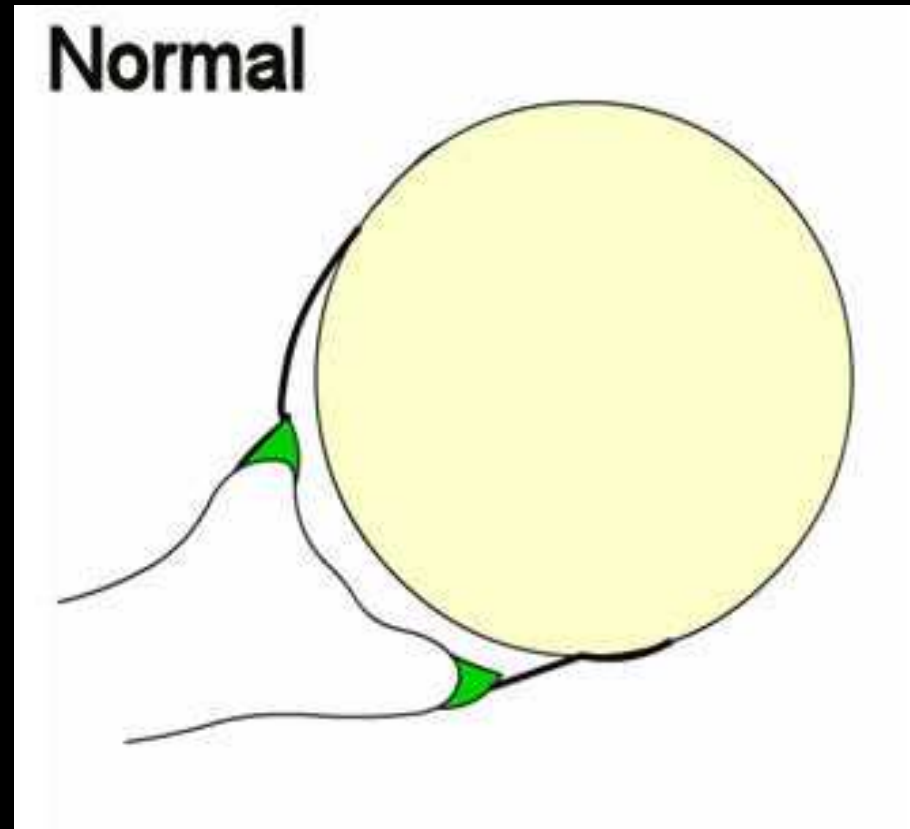
## Δευτερογενείς Κακώσεις

- οστική απώλεια (κεφαλή και ωμογλήνη)
- διάταση θυλάκου
- διάταση συνδέσμων
- ρήξη τενοντίου πετάλου
- βλάβες SLAP
- βλάβες άγκυρας δικεφάλου

## Στο πρώτο εξάρθημα

- Καλύτερη κατάσταση συνδέσμων
- Λιγότερες δευτερογενείς βλάβες
- Πιθανά καλύτερη επούλωση μαλακών μορίων
- Διατήρηση ιδιοδεκτικότητας
- Διατήρηση μυϊκού περιβλήματος

# Ακίνητοποίηση σε Έξω Στροφή



# 1. Αναγνώριση Παθολογικών Αλλοιώσεων

βραχιόνιο

Βλάβη  
Bankart

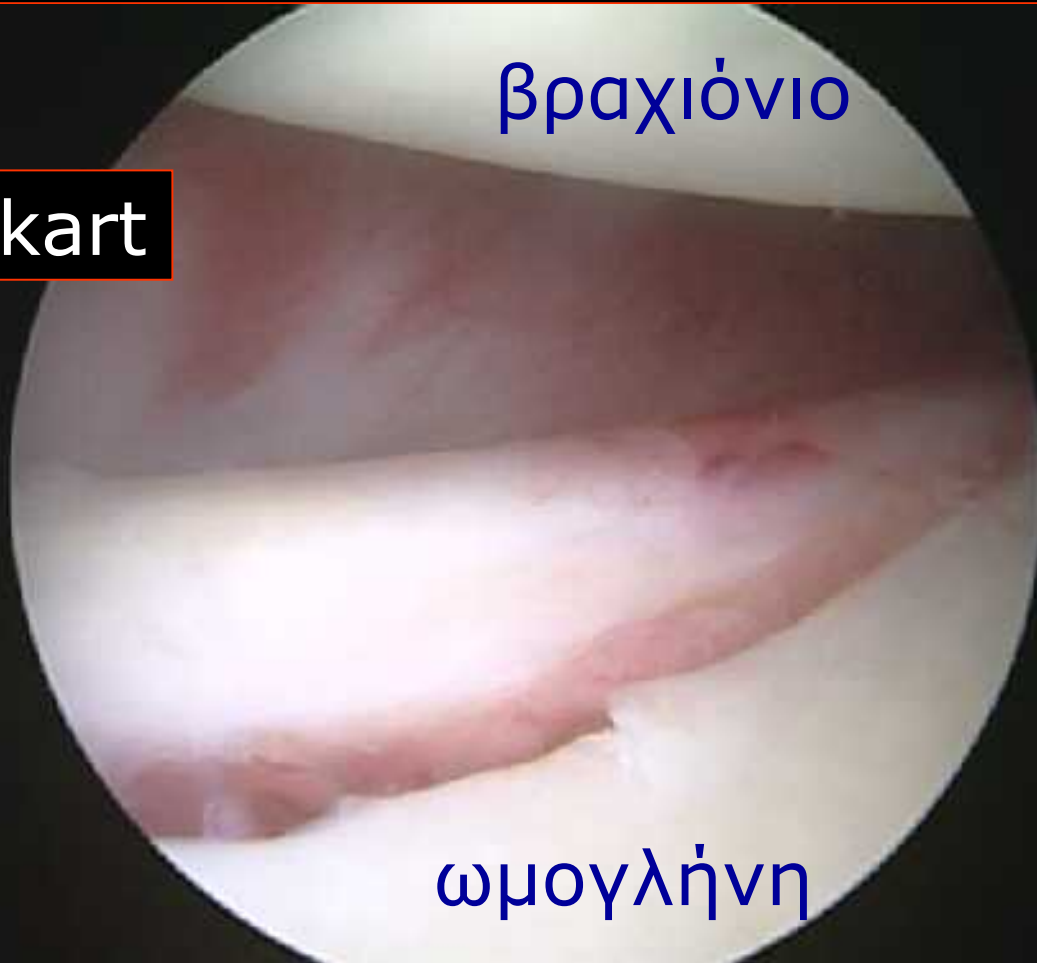


ωμογλήνη

# Βλάβη Bankart

βραχιόνιο

ωμογλήνη



## 2. Κινητοποίηση βλάβης Bankart και νεαροποίηση αυχένα ωμογλήνης





### 3. Τοποθέτηση Αγκυρών

1<sup>η</sup> άγκυρα

5 ο'clock

2<sup>η</sup>

3 ο'clock

3<sup>η</sup>

2 ο'clock



3-4 mm στην αρθρική επιφάνεια

## 4. Διεκβολή Ραμμάτων



## 5. Κόμποι



## 6. Τελικό Αποτέλεσμα



## 6. Τελικό Αποτέλεσμα



Ανακατασκευή του  
Προφυλακτήρα (labral bumper)

# Αποκατάσταση βλάβης SLAP



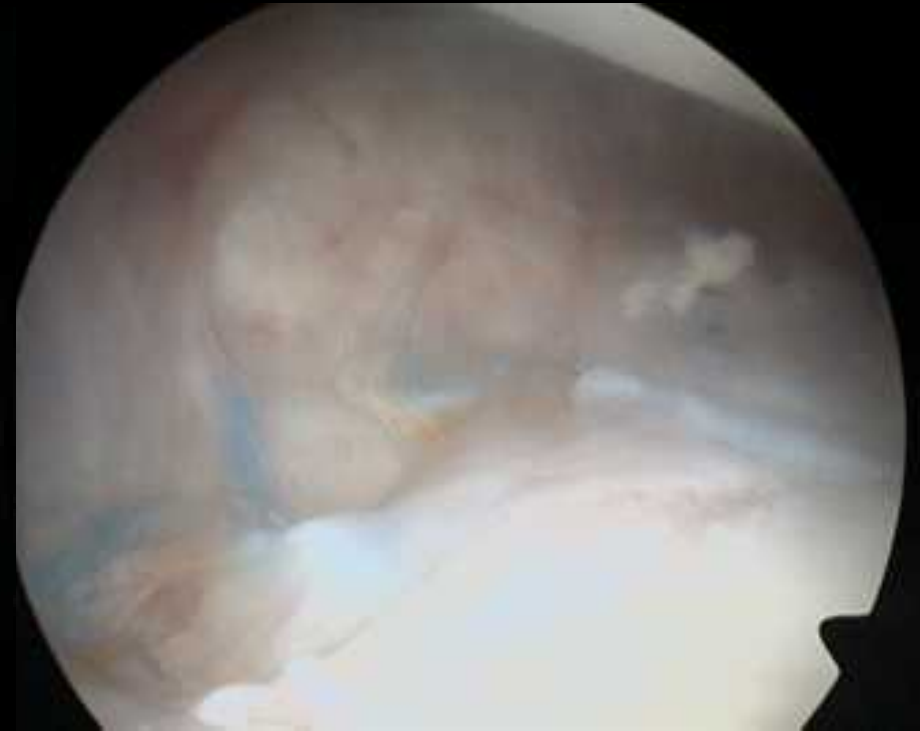
Επιχείλιος χόνδρος

# Σύγκλειση Διαστήματος Στροφών



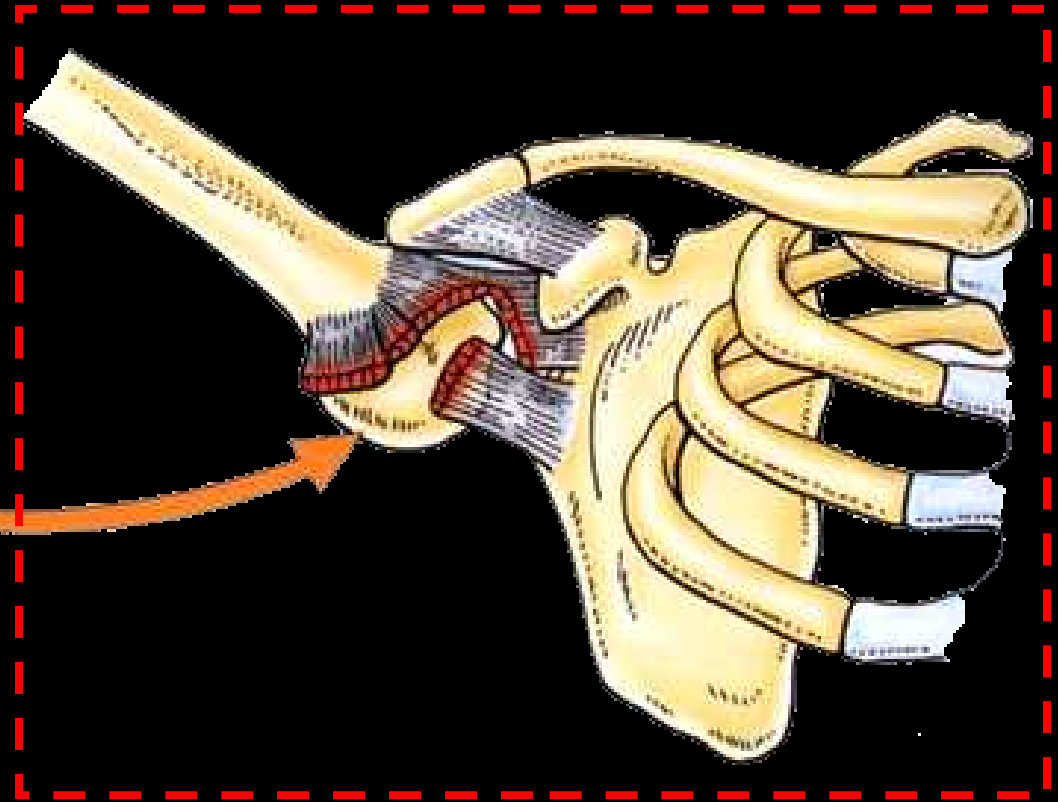
Σε έξω στροφή

10 Μήνες Αργότερα



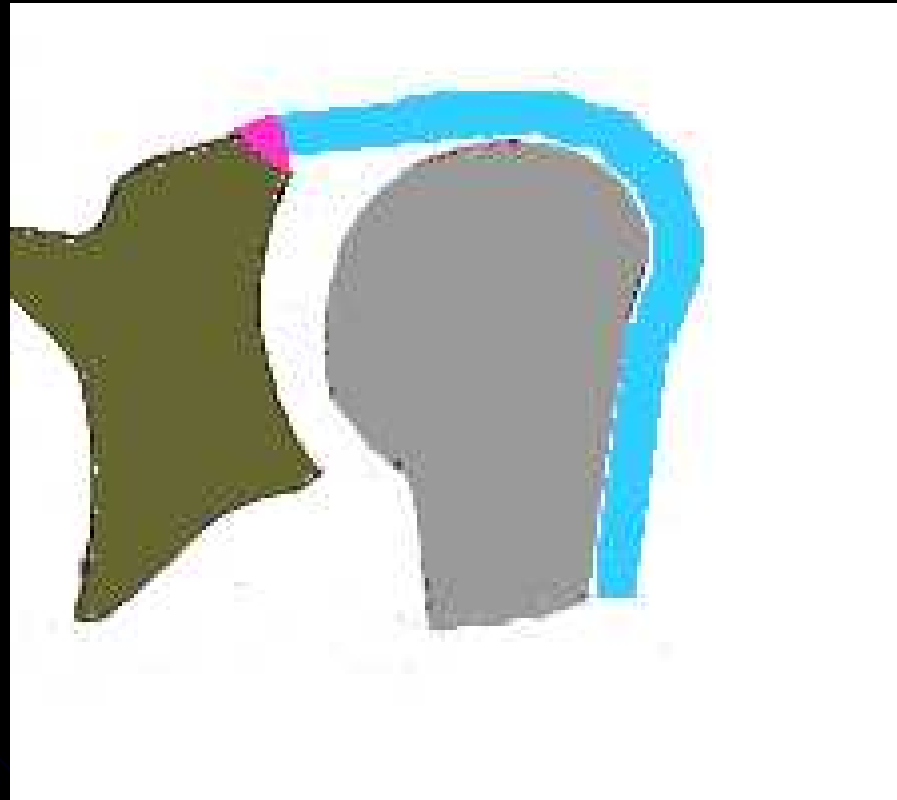


# Ο Ώμος σε Αθλήματα Ρίψεων

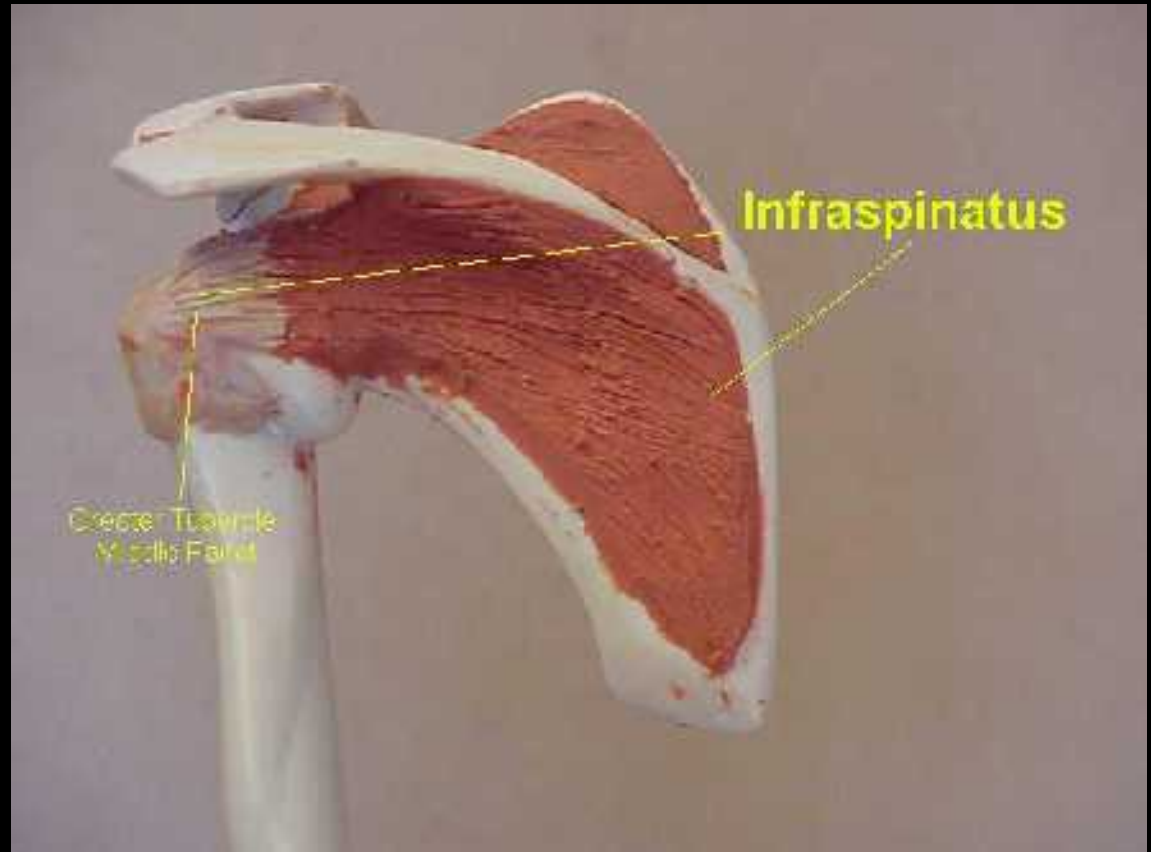
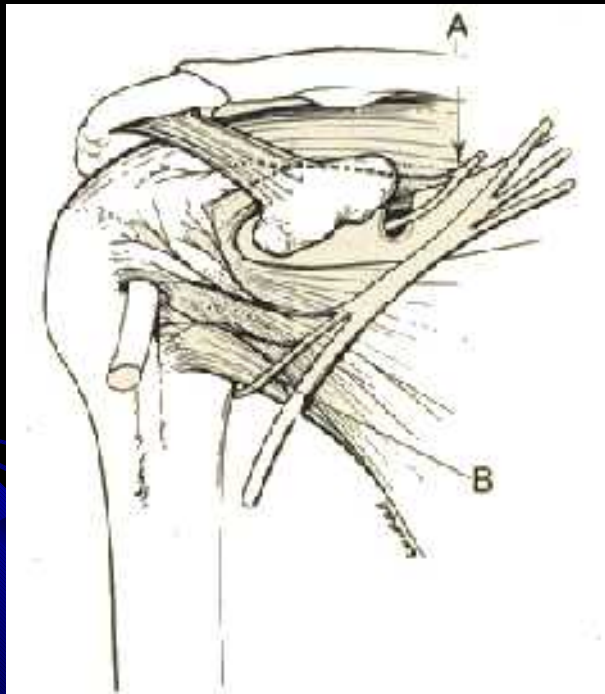




# Βλάβες SLAP



# Παγίδευση Υπερπλάτιου Νεύρου























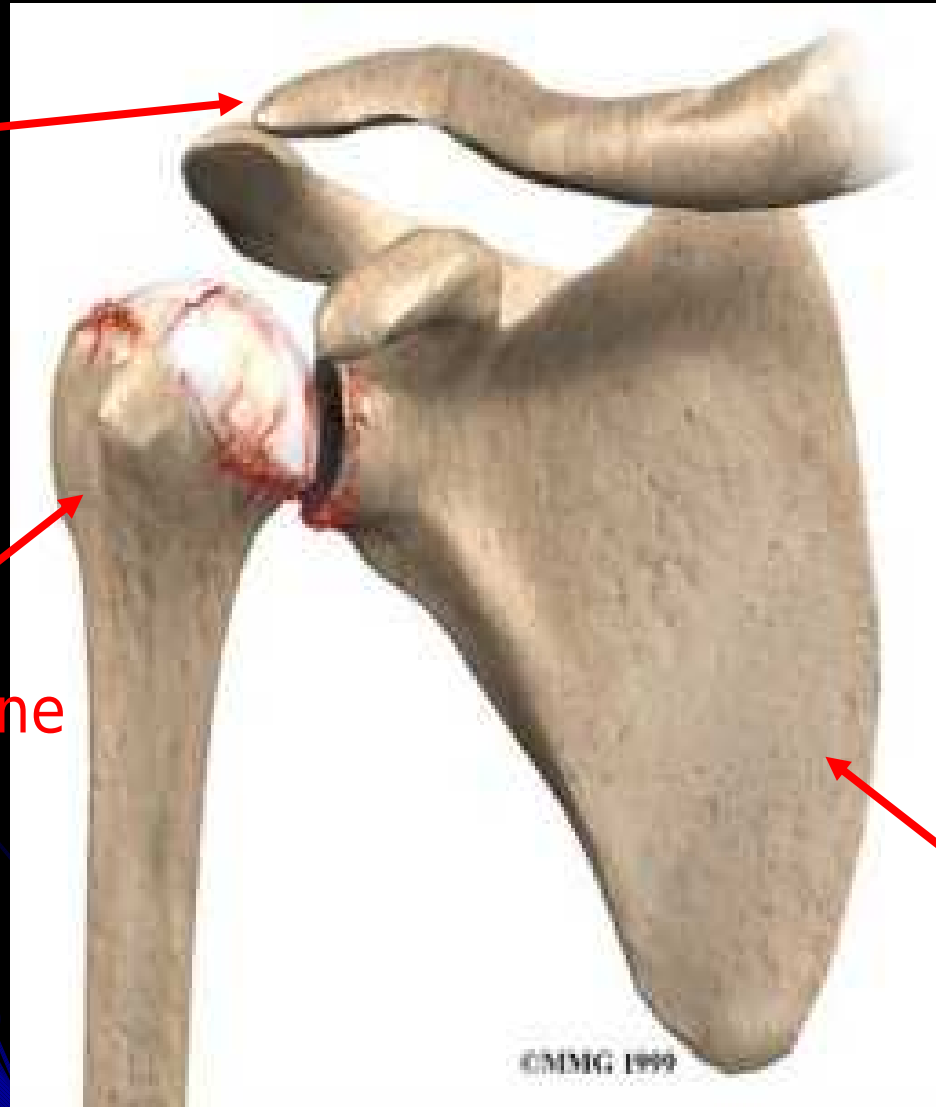


# Bone Anatomy

Collar Bone  
(Clavicle)

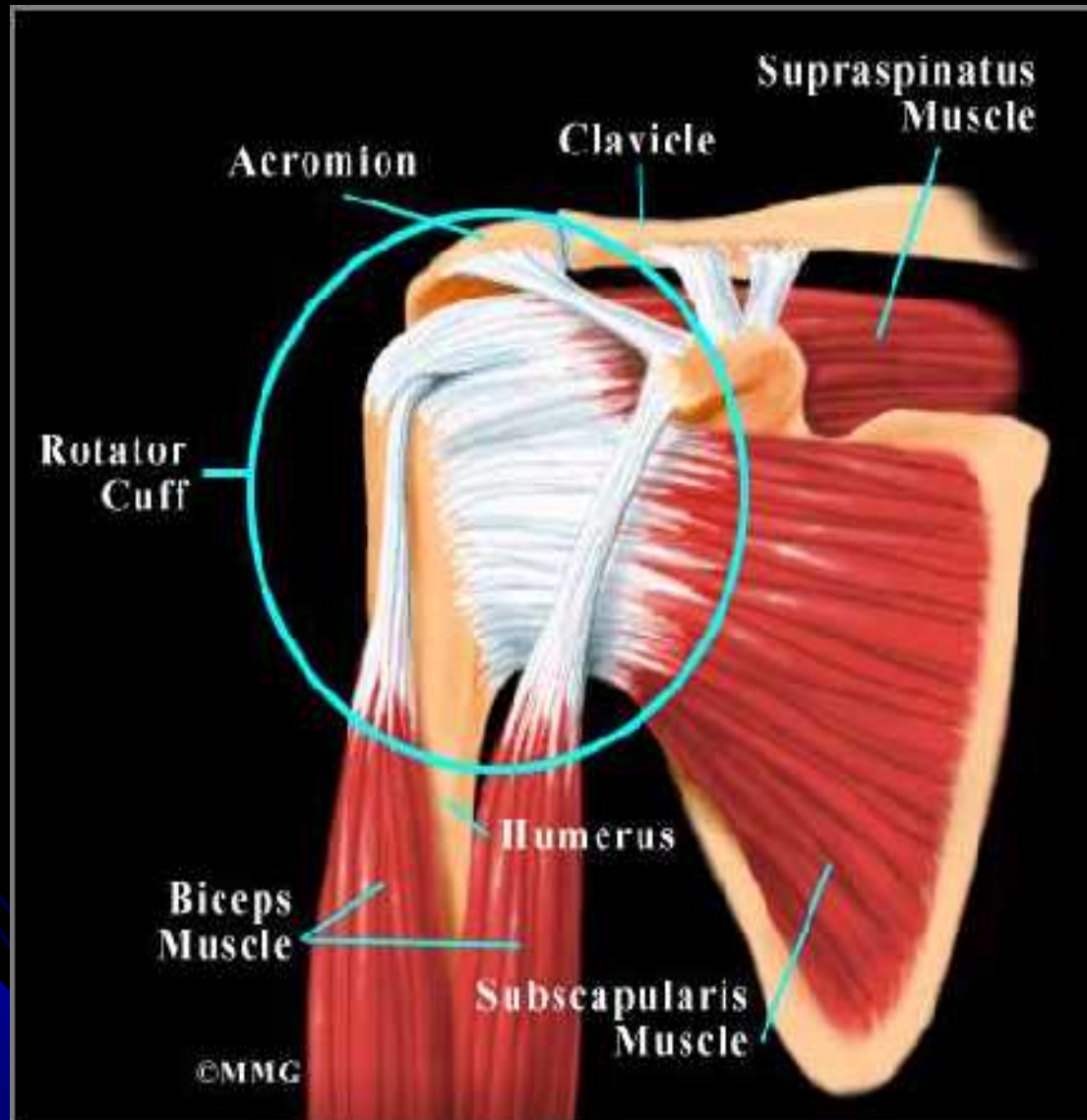
Upper Arm Bone  
(Humerus)

Shoulder Blade  
(Scapula)



# Rotator Cuff Tendinitis

## Muscle anatomy





# Rotator Cuff Tendinitis

## Purpose of tendon

- Rotator Cuff  
Tendon connects  
the Humerus  
w/Scapula  
(shoulder blade)
- Rotator Cuff  
Tendon helps  
raise/rotate the  
arm



# Rotator Cuff Tendinitis

## Purpose of tendon

- Rotator Cuff Tendon helps keep the Humerus tightly in the socket of the Scapula



# Rotator Cuff Tendinitis Causes:

- Rotator Cuff Tendon has areas where there is very poor blood supply (hence weakened shoulder)
- Weak shoulders + Excessive force = Torn Rotator Cuff
- Could occur at any age
- Caused by lifting heavy objects



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# Rotator Cuff Tendinitis

## Symptoms:

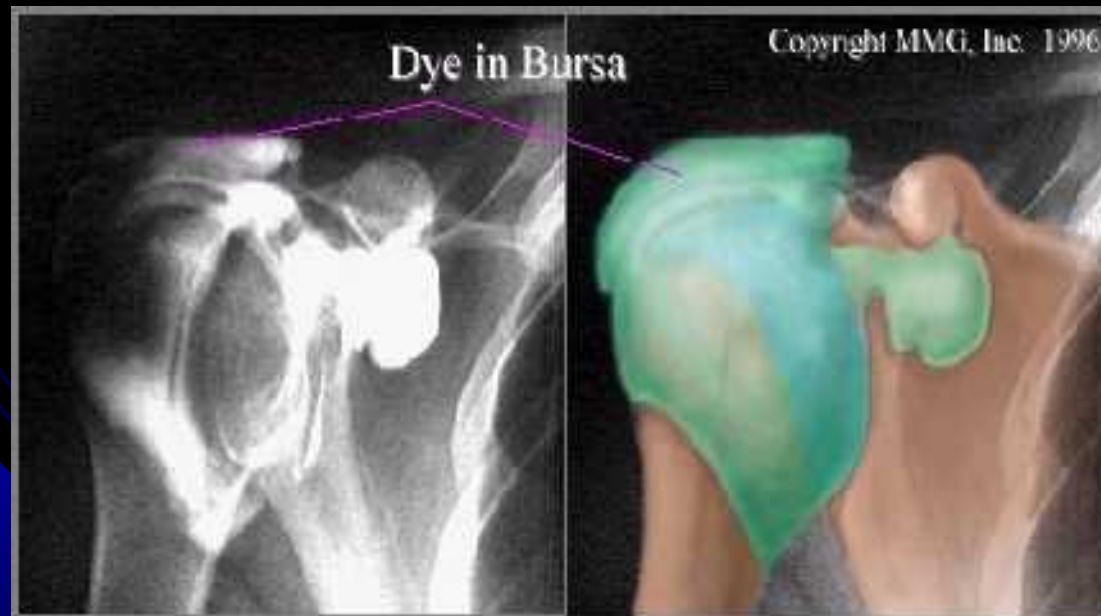
- Pain
- Weakness
- Results in “Catching” Sensation
- Partial Tear:
  - may cause pain only
  - Still allows arm to be raised
- Complete Tear:
  - Causes pain
  - Causes inability to raise arm
  - Inability to sleep on affected side



# Rotator Cuff Tendinitis

## Diagnosis:

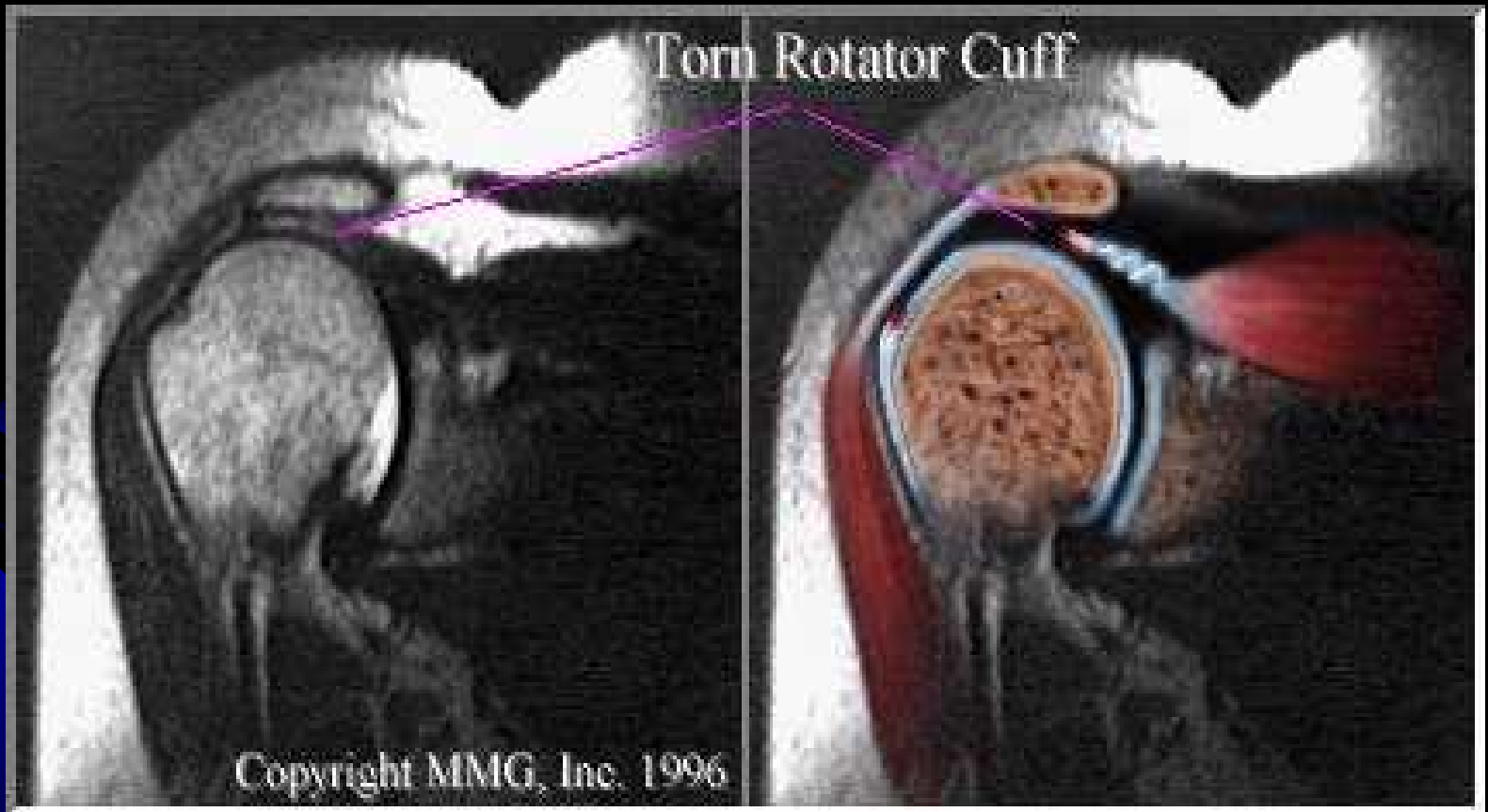
- If Dr. can move your arm in normal positions, but you can't, there is tear in the RC tendon
- Arthrogram (an older test)
  - Leakage of dye indicates a tear



# Rotator Cuff Tendinitis

## Diagnosis:

- MRI (Painless, requires no injection)



# Rotator Cuff Tendinitis Treatment:

- Early repair is advisable
  - 4-5" incision on side of shoulder
  - Humerus cleared
  - Holes drilled in Humerus
  - Tendon re-attached to Humerus
  - Tendons heals over time
- PT



# Rotator Cuff Tendinitis Worse Case Scenario

- Usually Torn RC is accompanied by other shoulder problems as well
- Torn tendons have been left for while, causing muscled/tendons to “CONTRACT”, or worn away
- Then, tendon grafts and muscle transfers, are an option

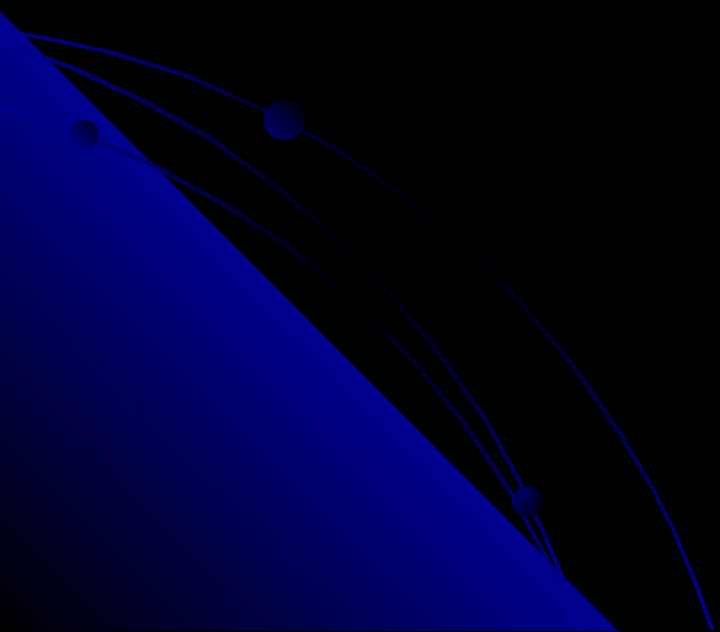


# Shoulder Bursitis



# Shoulder Bursitis

- Bursitis = Inflammation of Bursa
- Bursa is a lubricated sac of tissue
- Bursa reduces friction

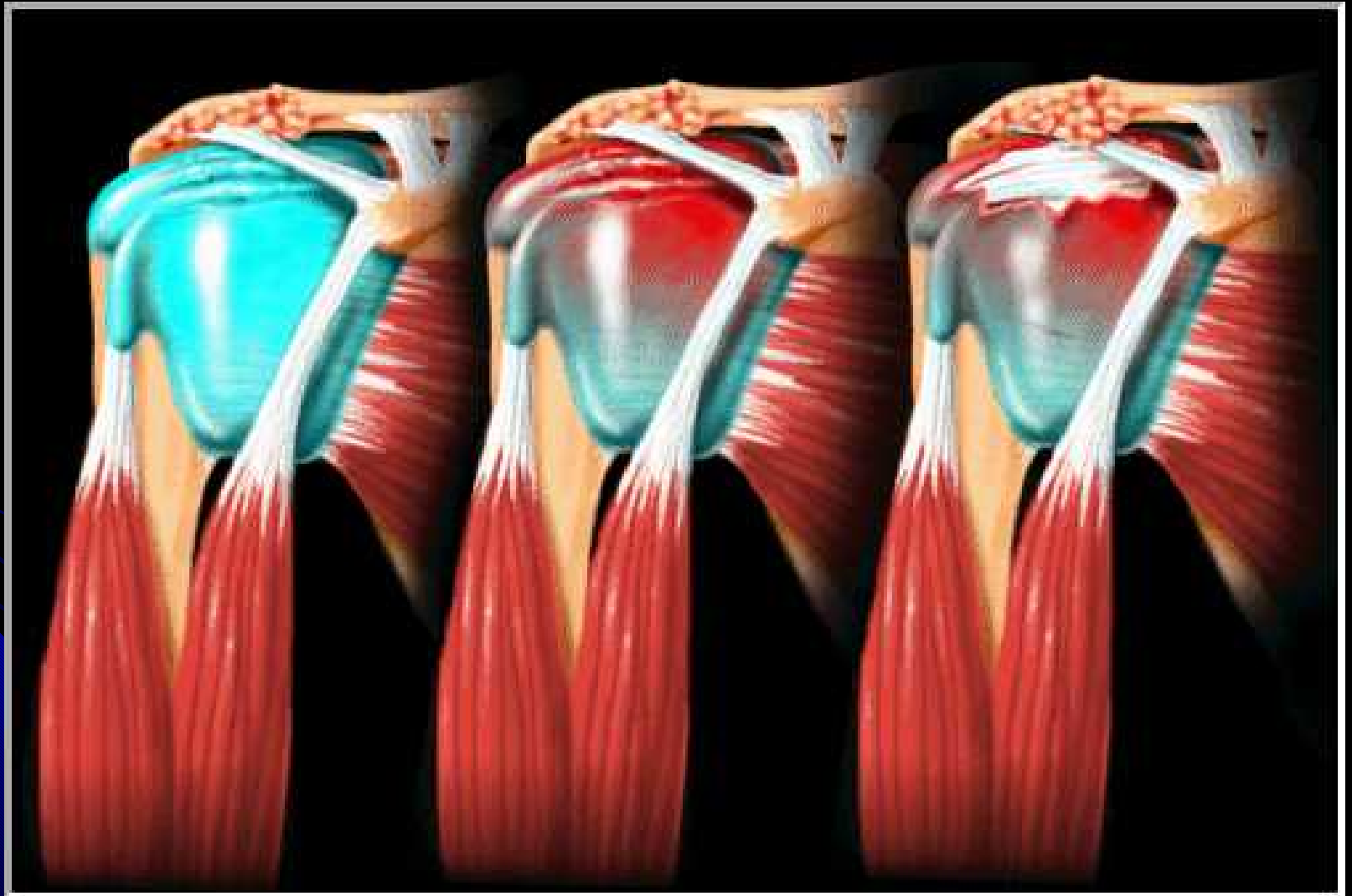


# Shoulder Bursitis -- Causes

- Each time the arm is raised, there is a bit of rubbing on the tendons and the bursa between the tendons and the Acromion.
- This rubbing, or pinching action, is called **Impingement**
- Caused by:
  - Repeated Raising of shoulders
  - A lot of overhead work
  - Repeated throwing activities
  - Repeated overuse of shoulders



# Progress of Shoulder Bursitis



# Shoulder Bursitis -- Symptoms

- Sharp pain when raising arm beside/in front of body
- Difficulty sleeping due to pain
- Reliable sign: SHARP PAIN when trying to reach into back pocket
- Stiffer joint
- Catching sensation when arm is lowered

# Shoulder Bursitis -- Diagnosis

- Physical Examination
- Arthrogram (X-Ray)
- MRI
- In some cases, pain may be coming from the neck
  - Therefore, inject a local anesthetic (like Novacaine) into bursa
  - If the pain goes away immediately after the bursa is injected with Novacaine, then most likely the pain is coming from there.

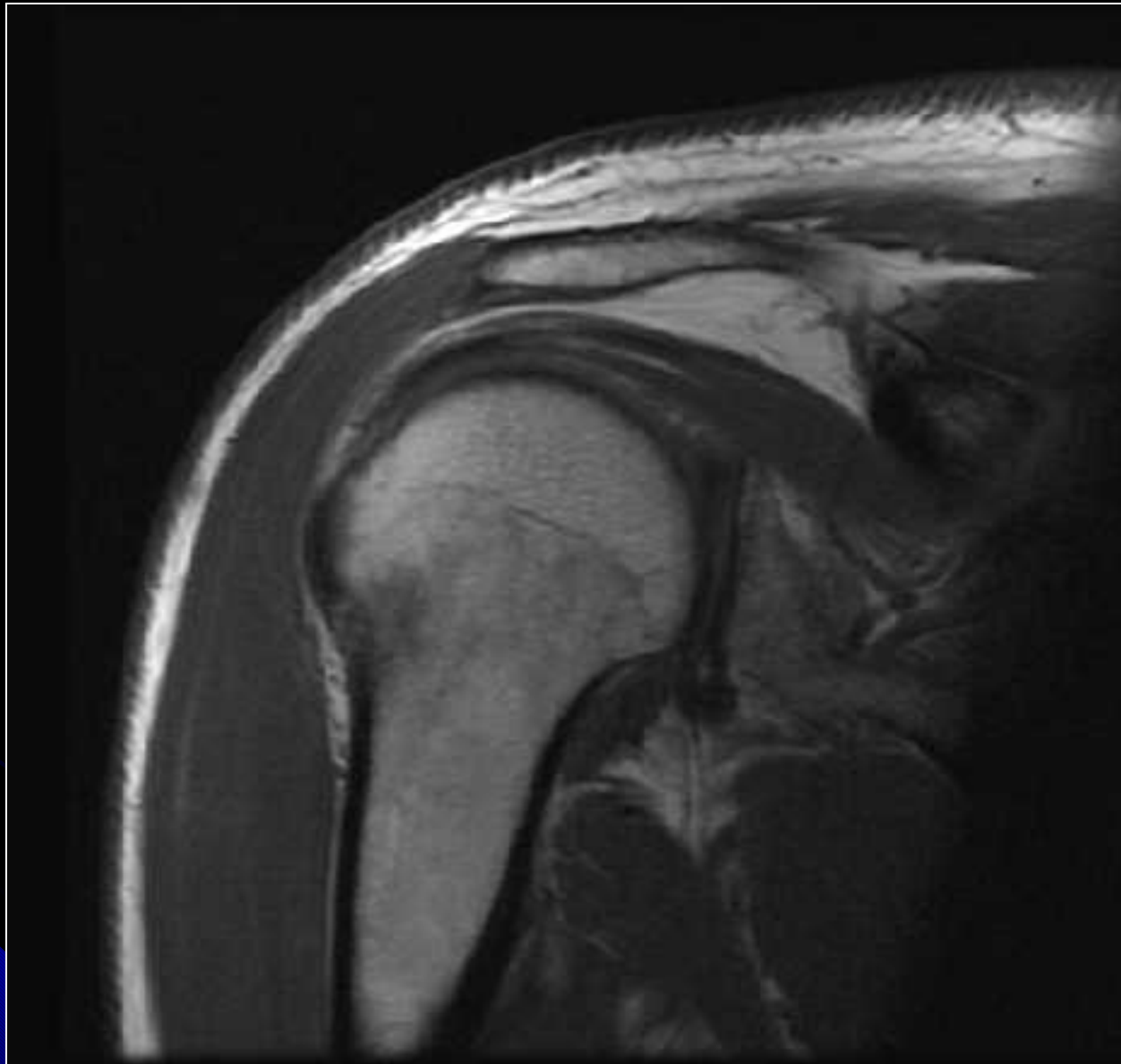
# Shoulder Bursitis – Treatment/Prevention

- **Rest:** ie, a sling to provide adequate rest
- **Ice:**
  - Ice decreases the size of blood vessels in the sore area, halting inflammation and relieving pain.
- **Medications:**
  - Anti-inflammatory medications (These include Aspirin, Ibuprofen, an injection of cortisone, etc.)
- **Physical Therapy:**
  - Strengthening the muscles of the Rotator Cuff can actually decrease the impingement of the Acromion on the rotator cuff tendons and bursa.
- **Worksite alterations:**
  - Reduce the need for overhead activity.
  - Stretching

# Shoulder Bursitis -- Surgery

- A small part of the Acromion is removed to give the tendons more space and allow them to move without rubbing on the underside of the Acromion
- Usually an incision about 3-4" is made over the top of the shoulder
- Recovery from shoulder surgery can be a slow process.
- Physical therapy will probably be needed for several weeks after surgery.
- Expect the process of recovery to take several months.





# Other Modalities

- Back Schools: - possibly effective
- Multidisciplinary Therapy: - probably yes
- TENS: - no
- Spinal manipulation: - conflicting data
- Massage: - probably yes
- IDET:























# Golfer's Elbow—Leading Activities

Results from aggressive motions that simulate the golf swing

- Shoveling
- Gardening
- Using hand tools
- Muscles overuse



# Tennis Elbow -- Leading Activities:

- All motions simulating the Tennis backhand swing, such as:
- Picking up heavy objects/buckets
- Muscles overuse



# Tennis Elbow – Causes:

- **Aging** causes weaker tendons
- **Small tears** in the tendon occur through overuse
- **Degeneration occurs** (loss of the normal arrangement of the fibers of the tendon)
- **Decreased blood flow** to the area

# Tennis Elbow – Symptoms:

- Tenderness and pain at the lateral epicondyle.
- This pain may be made worse by activities that require extending the wrist or holding an object in the hand with the wrist stiff.
- Pain may spread down the forearm with soreness felt in the forearm muscles.



# Tennis Elbow – Symptoms:

- Activities like grasping can make matters worse.
- Activities such as reaching into the refrigerator to get a gallon of milk can be a painful process!
- Some patients actually lose some motion in the elbow, ie, they can't completely straighten the elbow



# Tennis Elbow – Treatment:

- Surgery:
  - If all else fails



# Golfer's Elbow – Symptoms:

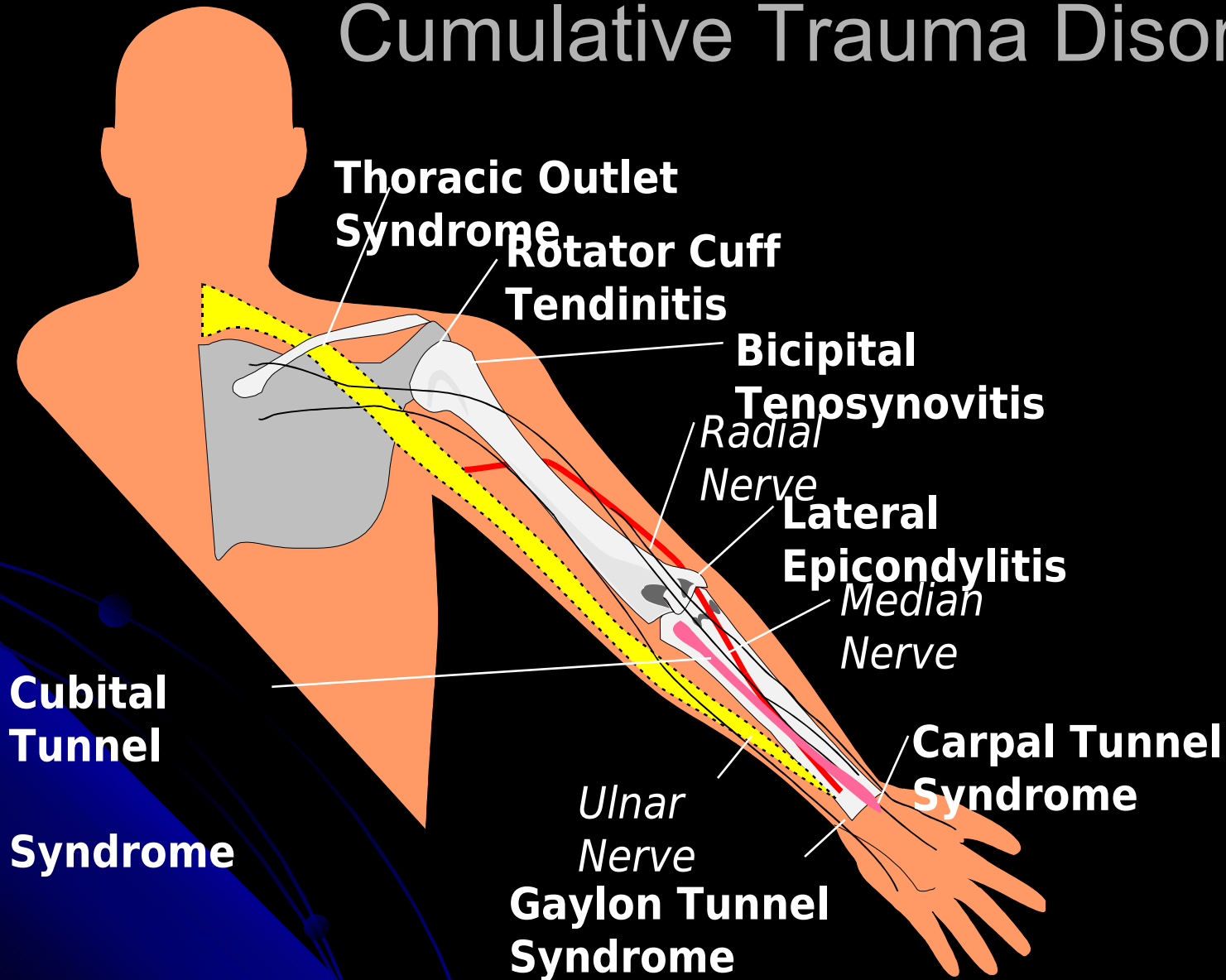
- Tenderness and pain at the Medial Epicondyle
- The pain can be made worse by flexing (bending) the wrist
- The pain may spread down the forearm
- Activities that use the flexor muscles in a bending motion or grasping with the hand can make matters worse



# Golfer's Elbow – Diagnosis:

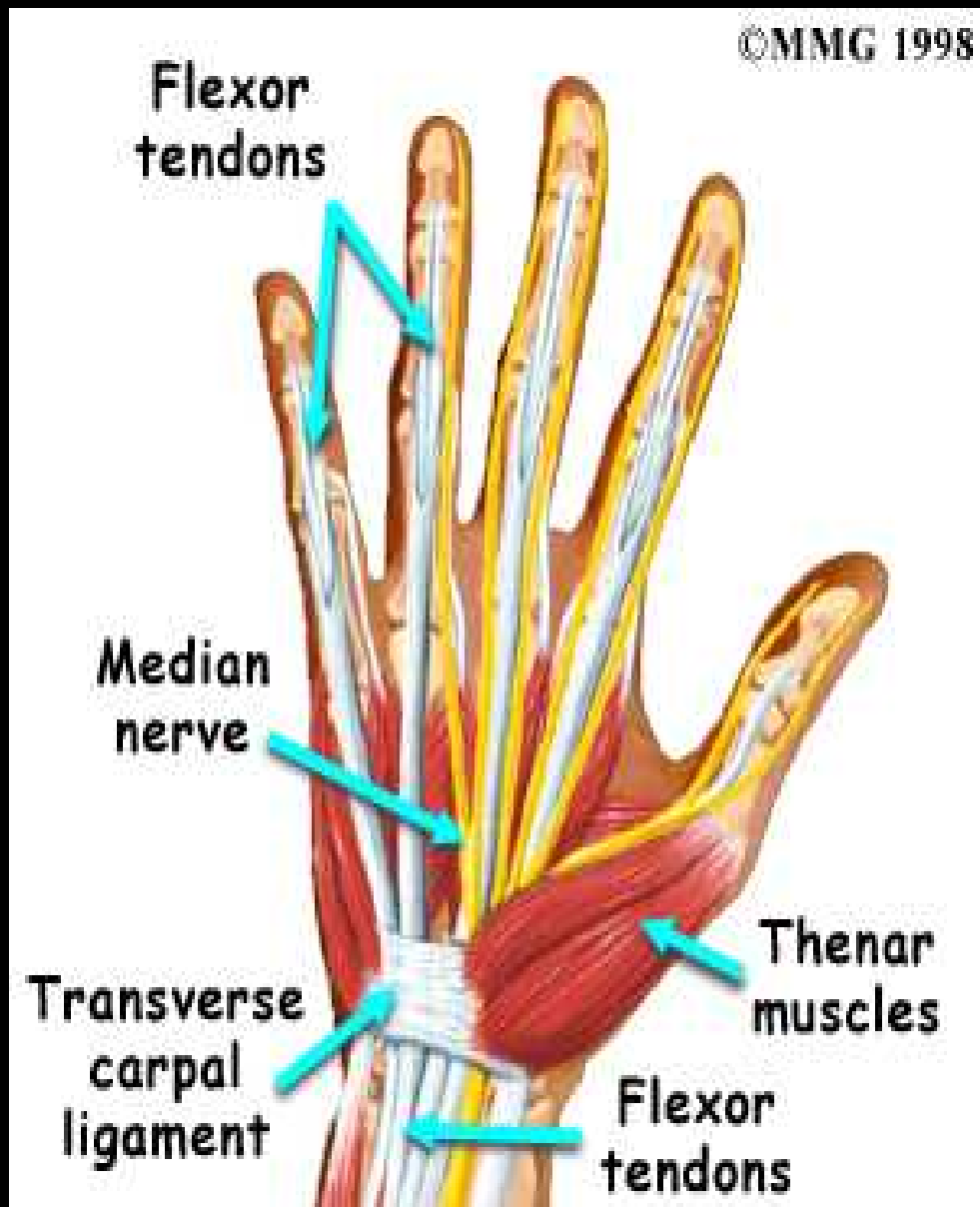
- Physical examination
- Tenderness in the area of attachment of the Medial Flexor Tendons and pain with use of the flexor muscles
- Medial Epicondylitis can sometimes mimic a pinched ulnar nerve in a condition called Cubital Tunnel Syndrome

# Common Upper Extremity Cumulative Trauma Disorders



# CTS Symptoms

- Pain
- Tingling
- Numbness
- Clumsiness
- Thenar atrophy
- Weakness in “opposition” movement)
- Numbness while gripping



# CTS -- Diagnosis

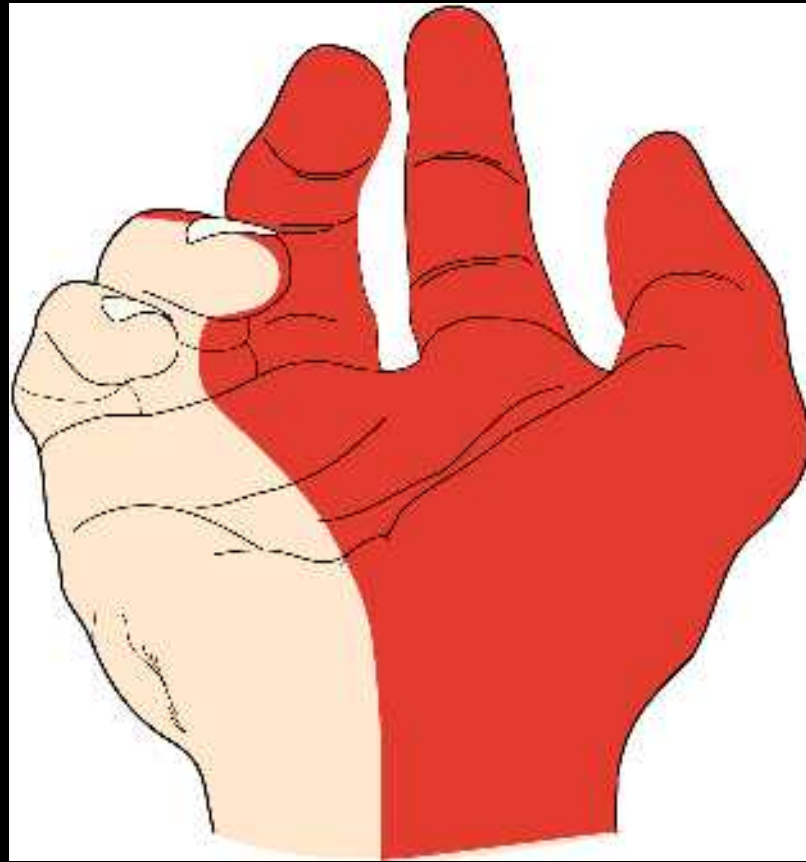
- Physical examination
- Symptoms & Complains
- Nerve Conduction Velocity Testing



# Median Nerve (Carpal Tunnel)

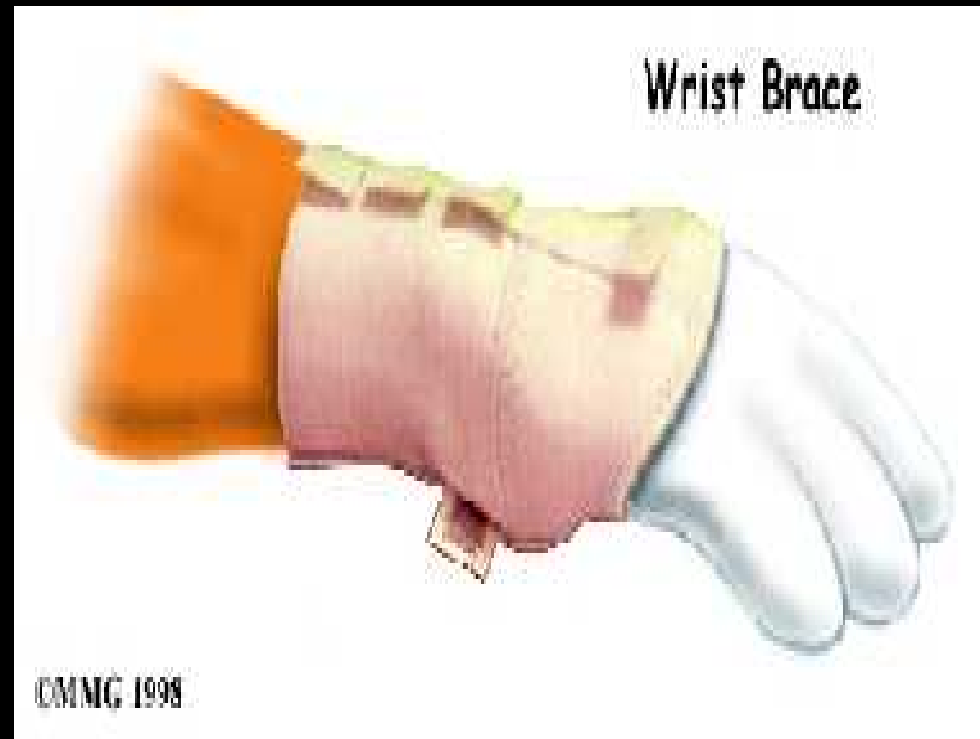






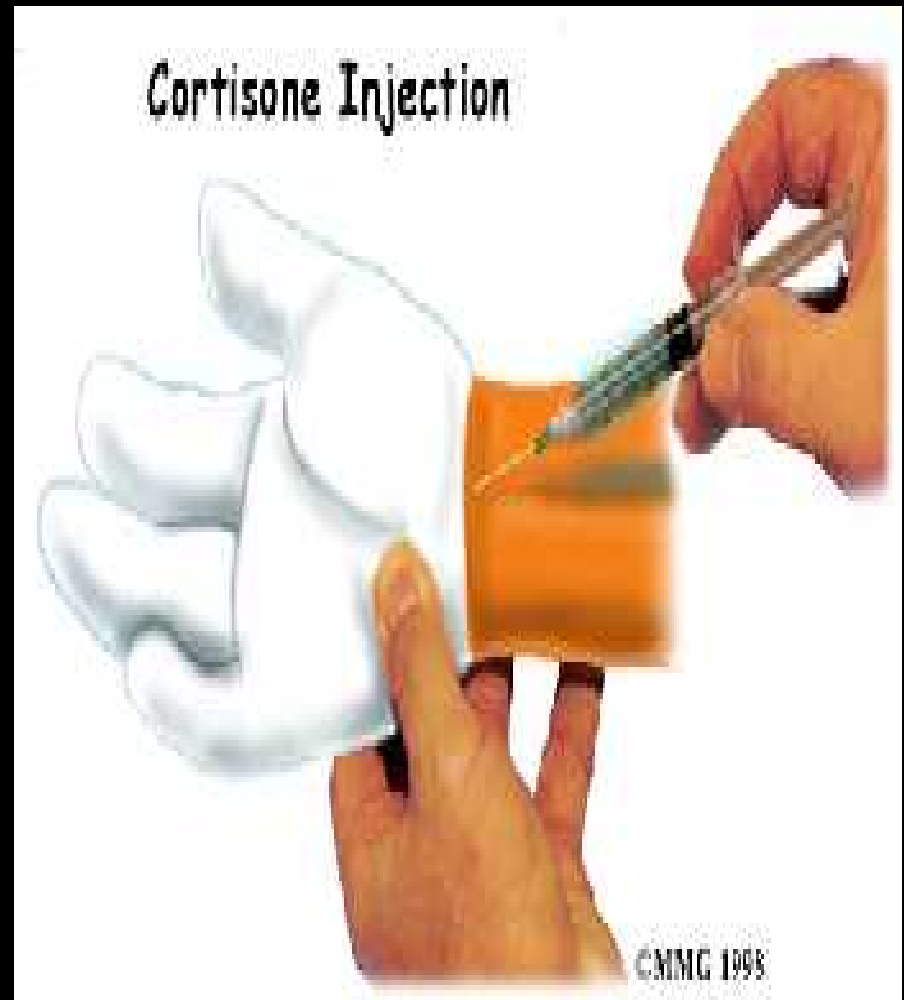
# CTS -- Treatment

- Rest (ie, Brace)
- Pain killers (ie, ibuprofen, aspirin, high doses of Vitamin B-6)

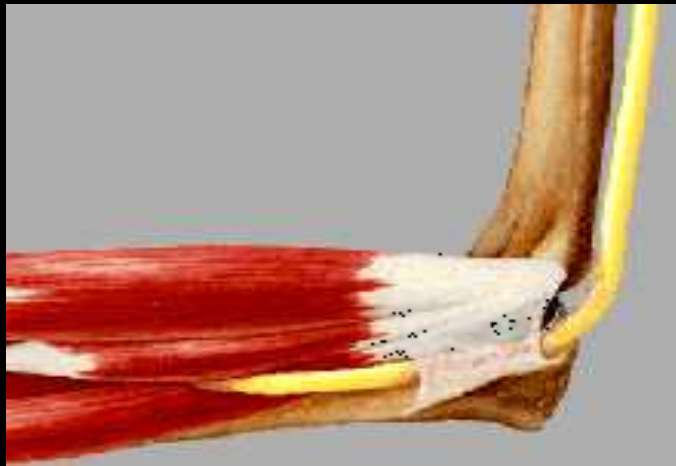


# CTS -- Treatment

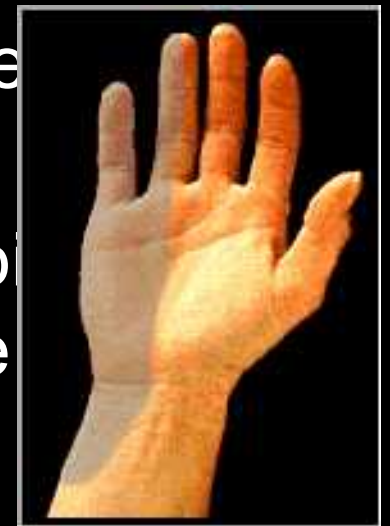
- Anti-inflammatory medicine
- Cortisone Injection
  - Decreases the swelling of the tenosynovium
  - Gives temporary relief of symptoms
  - Serves to aid in the diagnosis



# Cubital Tunnel, or 'Funny Bone'



- The ulnar nerve passes by the inside of the elbow through a fibrous tunnel.
- Swelling can put pressure on the ulnar nerve.
- Symptoms are felt at the elbow and into the finger.
- This is called Cubital Tunnel Syndrome



[Chung]

# Shoulder Pain



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