

## ROM & Tes Khusus Bahu

dr Rachmah Laksmi Ambardini  
 FIK Universitas Negeri Yogyakarta  
 Email: rachmah\_la@uny.ac.id

### Range of Motion- Aktif

- “Scratch” Test is the quickest way to evaluate:
  - External rotation/ abduction (Fig 1)
  - Internal rotation/ adduction (Fig 2)
  - Internal rotation/ adduction (Fig 3)

### Range of Motion: Shoulder

**Shoulder Flex/Ext:** Flexion is movement along the range of motion in the frontal plane of the arm in the shoulder joint.

**Shoulder Abd/Add:** Abduction is movement along the range of motion in the abduction and adduction of the arm at the shoulder joint.

### Range of Motion- Pasif

- Jika pasien tidak mampu melakukan gerakan s penuh pd tes aktif, tes ROM pasif harus dilakukan.
- Jika ROM pasif normal tetapi ROM aktif normal terbatas, kelemahan otot karena keterbatasan.
- Jika ROM pasif dan aktif terpengaruh, blokade struktur tulang (intra-articular) atau jar.lunak (di luar sendi) . Mis. Adhesive capsulitis

### Range of Motion- Pasif

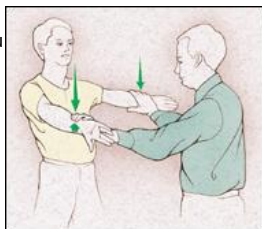
- Abduksi- 180 degrees
  - Isolate the GH joint
  - 1<sup>st</sup> 20-30 degrees of abduction don't require ST motion.
  - Arm internally rotated 1<sup>st</sup> 120 degrees (palm down)
  - Arm externally rotated (palm up) >120 degrees
- Aduksi- 45 degrees
- Flexi- 90 degrees
- Extensi- 45 degrees
- Internal Rotation- 55 deg
- External Rotation- 40-45 deg.

### Tes Kekuatan- Evaluasi Rotator Cuff

- Selalu bandingkan kedua ekstremitas.
- Isolasi kelompok otot rotator cuff
- Masalah rotator cuff adalah nyeri disertai kelemahan otot.
- Kelemahan otot yg sebenarnya harus dibedakan dengan kelemahan otot karena nyeri.

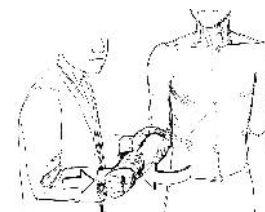
### Supraspinatus

- The "Empty can" test:
  - abduksikan sendi bahu 90 degrees dalam posisi flexi, dg ibu jari menunjuk ke bawah.
  - Pasien mencoba mngelvasikan lengan melawan tahanan pemeriksa.



### Infraspinatus dan Teres Minor

- Posis lengan pasien di sisi badan, flexi kedua siku 90 derajat sementara pemeriksa menahan melawan gerakan rotasi eksternal.



### Subscapularis

- Lift off test:
  - Patient rests dorsum of the hand on the back in the lumbar area.
  - Inability to move hand off the back by further internal rotation of the arm, suggests injury to subscapularis muscle



### Tes Provocative

- Fokuskan evaluasi pd masalah khusus yg diduga dialami pasien berdasarkan anamnesis & pemeriksaan fisik.
- Termasuk:
  - Impingment signs:
    - Neer's Sign,
    - Hawkin's Test
  - Rotator cuff tear
    - Drop Arm Test
  - AC joint Arthritis:
    - Cross-arm test
- Cervical Nerve disorder:
  - Spurling's Maneuver
- GH instability:
  - Apprehension test, Relocation (Jobe), Sulcus Sign
- Biceps Tendon instability/tendonitis:
  - Yergason test, Speed's maneuver
- Labral Disorders
  - Clunk Test, O'Brien's

### Impingement Signs

- Neer Sign
  - Arm in full flexion with arm fully pronated
  - Stabilize scapula
  - Pain= subacromial impingement- Rotator cuff tendons pinched under coracoacromial arch
- Hawkins Test
  - Forward Flex shoulder to 90 deg., elbow@ 90 deg., then IR
  - Pain= suprapinatus tendon impingement or tendonitis
  - ? More sensitive for impingement than Neer's



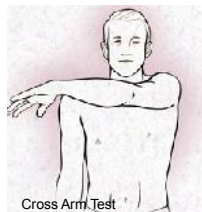
### Rotator Cuff Tear

- Drop Arm Test:
  - Passively abduct patient's shoulder to 90 degrees & have patient lower slowly to waist
  - Weakness or arm drop indicates rotator cuff tear/dysfunction
  - Note: the patient may be able to lower the arm slowly to 90 degrees (deltoid fxn) but will be unable to do so as far as the waist



### AC joint pathology

- Cross Arm Test:
  - Shoulder in 90 degrees forward flexion, then abduct arm across body
  - Pain indicates AC joint pathology
  - Decreased ROM indicates tight posterior capsule
- AC Shear
  - Cup hands over clavicle/scapula: then squeeze
  - Pain/movement= AC pathology



Cross Arm Test

### Cervical Nerve Pathology

- Pain that originates from the neck or radiates past elbow, is suspicious for neck disorder
- Spurling Maneuver
  - Extend neck and rotate head of patient to affected shoulder. Then apply axial load.
  - Reproduction of sx indicates cervical disk pathology



### Biceps Tendonitis

- Yergason's
  - Patient's elbow flexed at 90 deg with thumb up
  - Examiner grasps wrist, & resists patient attempt to supinate the arm and flex elbow
  - Pain= biceps tendonitis
- Speed's Maneuver
  - Flex pt's elbow to 20-30 degrees w/ forearm in supination and arm in 60 degrees of flexion
  - Examiner resists forward flexion and palpates biceps tendon



### Labral Disorders

- Clunk Test
  - Patient supine
  - Patient's arm is rotated & loaded from extension thru forward flexion.
  - "clunk sound" or clicking sensation, may indicate labral tear
- O'Brien's
  - 90 deg FF, max IR, then adduct and flex

