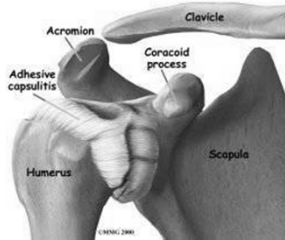


## The Dysfunctional Shoulder

EXERCISE  
ETC. INC.



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## Laura Abbott, MS, LMT



- Master's Degree, Sports Medicine
- Licensed Massage Therapist
- Undergraduate degree in Exercise Science
- Instructor of Kinesiology, Georgia State University
- ACE Certified Personal Trainer
- Guest speaker at Atlanta area massage schools and at the Georgia State University Physical Therapy department.
- Owner of Premier Performance, Atlanta, GA

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## How to Get Your CE Certificates

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- Log on to our website: [www.exercisetc.com](http://www.exercisetc.com)
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## REMINDER

Obtain medical clearance and physician's release prior to beginning an exercise program for clients with medical or orthopedic concerns.

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## The Role of the Fitness Professional in Injury Prevention & Rehabilitation

- May "SCREEN" clients for risk of injury based on written/verbal injury history
- If PAIN is current, MUST refer
  - i.e. Family Doctor, Orthopedic Surgeon, Physical Therapist, Certified Athletic Trainer
- May **NOT** "EVALUATE" injury based on symptoms present
- May Incorporate Exercises to Improve Function if Client is not experiencing Pain or Acute Injury

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## Responses Requiring Referral

- If numbness, "pins & needles," decreased circulation, burning, or radiating pain develops.
- If a decrease in strength occurs, especially on the eccentric phase.
- If pain free range of motion decreases.
- If pain (not soreness) develops that will not subside after 2 hours or more.
- If a partial or complete dislocation occurs.
- If swelling increases.

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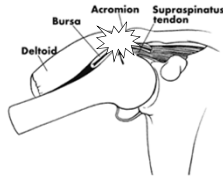
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## Four Common Chronic Shoulder Conditions

1. Impingement Syndromes
  - Supraspinatus
  - Biceps Tendon
2. Scapula Dysfunction
3. Rotator Cuff Dysfunction
4. Anterior Shoulder Instability



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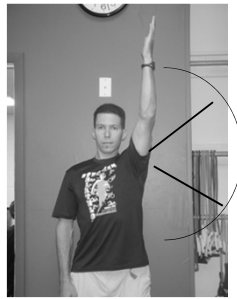
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## 1) Identifying Impingement

- Typically present with pain through 60 to 120 degrees of shoulder abduction or flexion
- This is referred to as the "Painful Arc"



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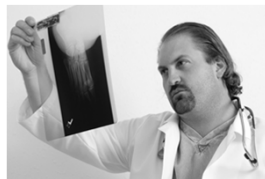
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## Potential Causes of Impingement

- Anatomical or Bony Abnormalities
- Scapula Dysfunction
- Muscle Imbalances / Poor posture /
- Poor Respiratory Function
- Poor Exercise Technique
- Overuse
- Secondary due to anterior shoulder laxity



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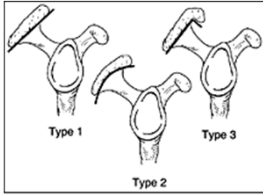
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## Acromion Shapes



**Figure 2**  
Three types of acromion process  
Magee D. *Orthopedic Physical Assessment*.  
3rd ed. Philadelphia: W.B. Saunders; 1997.

- Type 1:  
Flat acromion
- Type 2:  
Curved acromion
- Type 3:  
Hooked acromion

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## Program Progressions for Impingement

- Horizontal Pushing and Pulling
  - 1 press for every 2 pull exercises
  - Expect one or the other to be compromised; pushing or pulling
  - Avoid what hurts!



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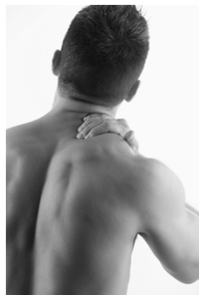
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## 2) Scapula Dysfunction

- Present in nearly 100% of Impingement & Rotator Cuff Injury cases
- Repairing is often not strong enough component of rehabilitation protocols



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## What is Scapula Dysfunction?

- **Winged Scapula**
  - Lengthened Serratus Anterior & Rhomboid
  - Shortened Pectoralis Minor
- **Scapula Dyskinesis**
  - Dysfunctional Co-contractions
  - Serratus Anterior and Lower Trapezius Weak or Inhibited
- **Scapula Distance from Spine**
  - >2.5 to 3 inches

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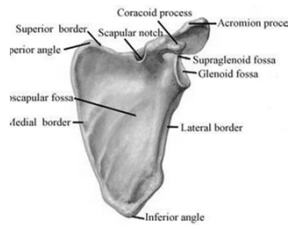
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## The Role of the Scapula



- The scapula must upwardly and downwardly rotate during shoulder abduction and adduction
  - 30-90 degrees

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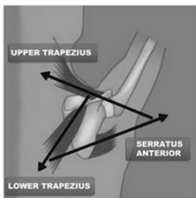
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## Roles in Scapula Rotation



- **Upward Rotators**
  - Trapezius
  - Serratus Anterior
- **Downward Rotators**
  - Pectoralis Minor
  - Levator Scapula
  - Rhomboids

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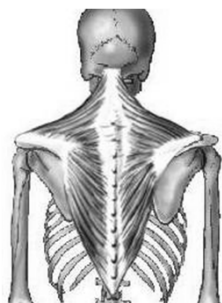
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## Look for Imbalances Among the Scapula Stabilizers

- Trapezius
  - Upper, Middle, Lower
- Serratus Anterior
- Levator Scapulae
- Rhomboids
- Pec Minor




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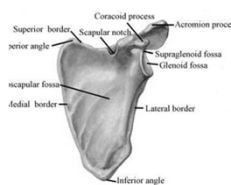
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## SCAPULA STABILIZATION

- Correct resting position of the scapula
- Improve co-contraction of scapula stabilizers
- Focus on Serratus Anterior, Rhomboids and Lower Trapezius




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## Training Scapula Adduction



- Trains the Rhomboids and Middle Trapezius
- Resist Scapula Adduction and Horizontal Shoulder Abduction

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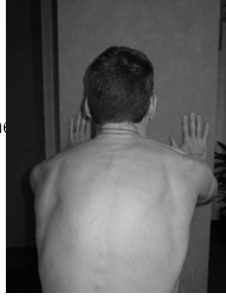
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## Training Scapula Abduction

- Push-Up +
  - Trains the Serratus Anterior
  - May require muscle energy technique)
- Progress from the wall to the floor
- Optimal is with Shoulder at 110° Flexion
- Alternatives:
  - Standing Tubing Presses



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## Training Scapula Depression

- Scapula Wall Slides
  - Depress and tilt the scapula posterior
  - Abduct/Adduct Shoulders
  - Trains lower trapezius
- Start on floor and progress to wall



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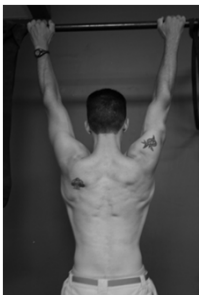
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## Training Scapula Depression (cont.)



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### 3) Rotator Cuff Dysfunction

- Significantly weaker External Rotators
  - <60% of Internal Rotation Strength
- Tight Posterior Shoulder Capsule causing poor internal rotation
- Posture
  - Excessive Cervical Lordosis
  - Excessive Thoracic Kyphosis
  - Excessive Internal Rotation

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### No More “Empty-Can” Exercises!



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### Gleno-humeral Internal Rotation Deficit (G.I.R.D.)



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## Improving Internal Rotation



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## Side-Lying DB External Rotation



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## The Cuff is Reactive!



- Integrate Proprioception Training
- Pendulum Swing
  - Used to maintain shoulder mobility during inflammation phase of acute injury
- Movement from Legs
  - Forward/Backward
  - Circular

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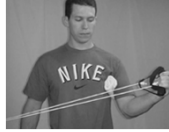
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## Tubing External/Internal Rotation

- Tubing Strengthens End ROM
- Use Scaption
- Tuck a rolled up towel tight to the armpit to stabilize the humerus



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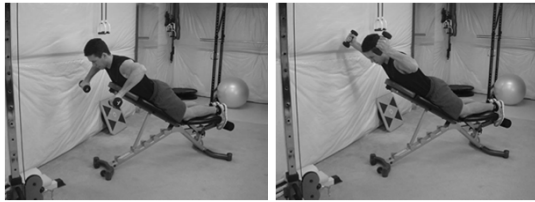
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## Prone DB External Rotation



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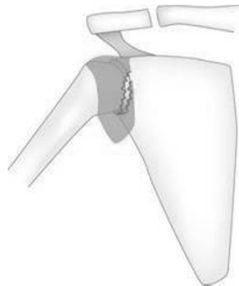
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## 4) Anterior Shoulder Instability

- Hyper-mobility of the humeral head forward leading to possible subluxation or dislocation
- High risk positions:
  - External rotation with > 90° abduction, horizontal abduction



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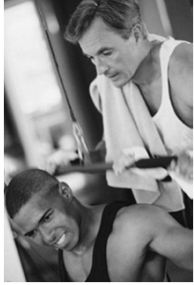
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### High Risk Activities to Avoid

- Push ups, hands wide
- Pec deck
- Chest flye
- Flat bench press
- Military (Shoulder) Press
- Lat pulldown behind neck



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### Use the Plane of Scaption (The plane of the scapula)

- 30 to 45 degrees anterior to the frontal plane



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### Rhythmic Stabilization

- Client on back with shoulders flexed 90 degrees
- Trainer presses in various directions for 60-120 seconds
- Progress to prone lying, hands on Ball



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Swiss Ball Prone Stabilization



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PNF Patters:  
D1 Pattern – Resisting Flexion



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D1 Pattern – Resisting Extension



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### D2 Pattern – Resisting Extension



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### D2 Pattern – Resisting Flexion



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