Unraveling the Mystery of Shoulder Pain #2:
Supraspinatus Muscle-Tendon Injuries

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Webinar Goal

Explore the assessment and treatment of one of the most common shoulder injuries: supraspinatus muscle-tendon unit strain
Logistics

- Time: 1 hour
- Schedule:
  - Presentation 30–40 min
  - Questions 15–20 min
- Ongoing questions: Use Question box. If I don’t get to your question, ask me on my Dr Ben Benjamin Facebook page after the webinar.
- Get a pen and paper please

Pretest

1. How many degrees of motion does the supraspinatus muscle control?
   a. 15-20 degrees
   b. 30-35 degrees
   c. 45-60 degrees
   d. 75-90 degrees
2. The supraspinatus muscle controls:
   a. Adduction of the arm
   b. Abduction of the arm
   c. Horizontal abduction of the arm
   d. Flexion of the shoulder
3. The supraspinatus muscle is one of the strongest shoulder muscles.
   True or False?
4. The supraspinatus muscle tendon unit attaches to:
   a. the lesser tubercle of the humerus
   b. the head of the humerus
   c. the greater tubercle of the humerus
   d. none of the above
5. The supraspinatus muscle is the primary mover:
   a. in throwing a ball
   b. using a hammer
   c. carrying an attaché case
   d. painting a wall
Anatomy

Supraspinatus Function

- Abducts the arm
- Helps to stabilize the shoulder into the glenoid fossa
Supraspinatus Anatomy

- Located on top of your shoulder in the supraspinatus fossa of the posterior scapula
- Passes under the acromion and the acromioclavicular joint
- Attaches to the superior facet on the greater tubercle
- Enervated by the suprascapular nerve

Locating the Supraspinatus

Sits under the trapezius muscle between your neck and your shoulder
Tenoperiosteal Junction

The Rotator Cuff

- All four tendons in the shoulder interlace
- As a result, they are often injured simultaneously
- Common continuous insertion on the humerus is known as the rotator cuff
2 Common Factors in Tendon Weakness

• Disuse
• Aging

How do tendon fibers break down?

• Granularity: distorted connective tissue cells
• Broken, frayed fibers
• Increasingly common with age (over 40), with a sedentary lifestyle
Neer’s Four Conclusions

1. 40 percent of those with rotator cuff problems had “never done strenuous physical work.”

2. Rotator cuff problems are frequently bilateral.

3. Many heavy laborers never develop rotator cuff problems.

4. 50 percent of patients with rotator cuff problems had no recollection of shoulder trauma.

Deep and Superficial Distal End

- Distal end: where the tendon attaches to the humerus
- Superficial distal end: near the surface of the skin
- Deep distal end: deeper in the body
Assessment

Assessment Tests

• Resisted Abduction
• Passive Elevation
• Painful Arc
Resisted Abduction

Passive Elevation
Painful Arc

Theory
Assessment Test Results for the Supraspinatus

- Pain on resisted abduction: supraspinatus is injured
- Pain on resisted abduction and passive abduction: deep distal end is injured
- Pain on resisted abduction and painful arc: superficial distal end is injured

What is the primary test to tell you that the subscapularis is injured?
How does this injury happen?

- Sudden exertion beyond normal activity
- Lifting a suitcase or massage table
- Usually injured at tenoperiosteal junction

Clinical Application
Clinical Application

- There is pain on resisted abduction.
- There is a painful arc and pain on passive elevation.
- What is injured?

Treatment
Watch the videos at the end of the Webinar

TIEP Exercise Therapy

1. Warm up
2. Stretch
3. Strength
4. Stretch
5. Ice
Questions

Facebook.com/DrBenBenjamin

Post-test

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   d. painting a wall