#### Coaching the Body: Treating Frozen Shoulder

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Subscapularis and Infraspinatus

#### Frozen Shoulder: Misunderstood and Mistreated

The illustration at the right, taken randomly from the internet, shows the common pain patterns of "frozen shoulder", which is considered by the medical establishment to be an injury involving the development of "adhesions" in the joint capsule. This is an unscientific and unsubstantiated model that causes patients to suffer much longer than they need to.

Interestingly, the pain patterns at the right are nearly identical to a composite pain referral chart of the infraspinatus and subscapularis muscles.



Pain is generally felt over the front and sides of the shoulder. Stiffness can cause pain to radiate down the arm to the wrist and hand, up to the neck, and around to the upper back.

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### "Frozen" Shoulder

- Frozen shoulder is an imprecise and non-specific diagnosis, which simply indicates greatly impaired movement.
- The shoulder joint is particularly vulnerable to "splinting", in which a network of associated trigger points develops in response to an initial pain pattern. This serves to reduce ROM in the joint in response to a "perceived injury". Arm becomes held in medial rotation and adduction. Examiners may conclude that there is true adhesive capsulitis.
- The client will often be resistant to any level of motion of the arm

   having experienced sharp pain and now have significant fear &
   expectation of reproducing it.

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Subscapularis and Infraspinatus

#### Understanding the Body's Logic

Clinically, frozen shoulder presents as an inability to move the arm independent of the scapula without severe pain. This begins as an adaptation to pain that is often minor - but motivates the client to limit motion. Over time, muscles become increasingly stagnant and develop more and more taut fibers, trigger points and referred pain.

If we understand the symptoms of frozen shoulder as an attempt by the body to limit motion due to a perceived (but not real) injury ("splinting"), we can treat the condition with the techniques of Coaching the Body. We have successfully treated many cases, often in a session or two. If the cause were adhesions or "scar tissue" this would be impossible.



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# Examining the Pain Patterns

- If we compare the "frozen shoulder pain pattern" with a composite trigger point pain referral chart of the subscap and infra muscles, the similarity is obvious.
   Trigger points in these commonly involved muscles are responsible for much of the pain of frozen shoulder.
- \* While there are often many shoulder muscles involved, these two are often at the core of the issue. Travell & Simons cite the subscap as the initiator of this condition.
- We have many postural and lifestyle factors in our culture that encourage shortening of the subscap and painful defacilitation of the infra.



Subscapularis and Infraspinatus

#### Treating Muscle Relationships

Muscles are not isolated - they work in systems and their proper functioning is intimately dependent upon the proper functioning of the system they are part of.

We cannot treat muscles in isolation and expect lasting results. We have to observe and normalize the behavior of the muscle's functional unit. Quality and range of joint motion are good indicators of progress.



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Movers of the Scapula

# Shoulder Motion & Common Limiters

Flexion: clavicular pec major, deltoid, infra, scapular stabilizersExtension: deltoid, teres major, triceps, levator

Abduction: supra and high trap on short, teres major, lat, costal pec on stretch, scapular stabilizers Adduction: supra on stretch

Medial Rotation: infra, teres minor Lateral Rotation: subscap, pecs, infra on short



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The Muscles of the Shoulder

### Shoulder ROM: Scapulohumeral Rhythm

In a healthy shoulder, both the shoulder joint and the scapula must move properly. For every 60° that the arm abducts, the scapula should rotate 30° for a total of 90°.

# **Becoming Precise Observers**

- We carefully observe active and passive motion: flexion/extension, abduction/adduction, internal/external rotation.
- Observe how and if the arm moves in relation to the scapula (scapulohumeral rhythm), and how scapular motion is impeded.
- Must gain the trust of the client, that we will not move them suddenly or cause sharp pain. Always move slowly and get constant pain scale feedback.
- Monitor muscle behavior during each type of motion using palpation, and have the client precisely describe where they feel the discomfort. This could be due to referral, contraction on the short or stretch response.
- Use these clues to identify the most prominent limiters at each stage.

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# Incrementally Increasing Motion

- For the prominent limiter at each step, observe and treat the agonist/antagonist pair for contraction on the short, referral on stretch. Work each side into short (compression/EPS), contract/ relax, stretch with feedback on the muscle and referral zone.
- As range increases, the prominent limiters will likely change. For example, as you increase the ability of the subscap to lengthen, the infraspinatus may start to block motion due to contraction on the short.

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# Approaching the Shoulder Protocol

- The shoulder protocol begins with the arm mildly abducted and externally rotated. In frozen shoulder this will not be realistic.
   We have to do remedial work prior to entering the protocol.
- We have to begin by using coaching the body techniques to achieve more abduction. With 20-30 degrees of abduction we can treat the subscap/infra – difficult without. Use contract/ relax with lots of feedback to begin to release teres major, lat, supraspinatus, infraspinatus, high trap.
- Then we can begin to increase external rotation and more fully treat subscap, infra.

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### Functional Unit for Abduction ROM

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- Abduction and external rotation are often the most difficult motions in frozen shoulder clients.
- Active abduction is driven by supra, deltoid and high trapezius, with the serratus anterior assisting in scapular upward rotation. Infra and subscap are important stabilizers of the humerus.
- Lat, teres major and pec major must gracefully lengthen to permit full range. The mid and low trap must be able to stabilize without dysfunction.



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# Restoring Abduction ROM

- Provide manual feedback over posterior muscles: supraspinatus, high trap, infraspinatus.
- Contract adduct arm against the side to engage teres major, subscap. Inhale and hold for 5 seconds.
- Gently and slowly move the arm into abduction. Observe which muscles harden and engage. Ask the client where they feel pain at ROM limit. Supra, trap, infra should remain soft. If not, they are contracting on the short.
- We need to be able to create enough abduction to reach the subscap. Even



#### **Restoring Abduction**

#### Restoring Glenohumeral Motion

If the client lifts their shoulder as you try to abduct, the scapula is compensating for severely limited movement of the arm at the scapula. Subscap and teres major could be engaging to splint the motion. Our goal initially is to restore at least some degree of glenohumeral abduction via contract/relax so we can treat the subscap.



# Feedback on Teres Major & Subscap

- Once the client is able to achieve at least 10-20 degrees of glenohumeral abduction, you can provide feedback on the subscapularis and teres major, which will lessen their tendency to splint the motion.
- If the client experiences strong posterior shoulder referral on abduction, that is likely one or both of these muscles.



# Feedback on Shortening Abductors

- Increase abduction with firm feedback on supra and trap. Try to find tender areas and hold as you move into abduction.
- Continue to address the lengthening and shortening side until you have sufficient abduction to carry out treatment of subscap and teres major.



Movers of the Scapula

### Scapular Stabilizers

Hard rhomboids and mid-trap could make it very difficult to move the scapula away from the spine. This presents a severe challenge when we try to treat the subscap, because we can't get over the lateral border. This issue must be addressed in side position.



# Improving Scapular Abduction

- Mid and low trap and rhomboids, if they are very hard will tend to contract on the short and will restrict scapular abduction. This makes subscap treatment very difficult.
- Use vigorous cross-fibering and treatment into short to make these muscles more mobile.



# Improving External Rotation

• External rotation could be limited by subscap, clavicular pec major or infra contracting on the short. Palpate and assess these muscles and treat the prominent limiters.



## Shoulder Protocol Online Course

- We've created the CTB Shoulder protocol online course as an additional resource on the topic of designing treatments for shoulder pain.
- We don't have time in the body area classes to cover each protocol in any depth - focus is on learning treatment for each muscle.
- Enroll at <u>http://</u> <u>thaibodywork.com/online-</u> <u>courses</u>



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# Coaching the Body: Principles

- Coaching the Body: facilitating the body's emergence from a "state of confusion" as opposed to fixing something that is broken. Coaching versus therapy.
- The body has an innate ability to heal and return to balance given appropriate facilitative inputs.
- This approach engages the client in their own healing, and generally produces impressive results in a single session, including severe cases such as frozen shoulder.



### The CTB Approach

- **MISSION:** to change the misguided and damaging approach to pain treatment in our mainstream culture, empowering individuals through education and direct experience.
- **Bodywork:** using a facilitative approach to assist the body in unraveling misguided self-protective mechanisms (joints splinted by muscles with TrPs).
- Self-Care: teach the client to be independently capable of bringing the body back to balance. This empowers the client and gets us out of the dependency relationship.
- Corrective exercise: strengthen, lengthen and balance using the CTB principles of movement, including MET, informed by trigger point theory.



## The CTB Approach: Bodywork

- Use active and assisted movement to assess the prominent limiters at each stage of therapy.
- Use compression, EPS, MET on active limiters in combination with movement to retrain the body that movement can be safe and pain-free. Watch for blocking on the short.
- Treat the shortening side by compression into short combined with MET until the muscle is able to gracefully shorten. This will permit additional stretch of the opposing functional group. Ultimately fibers must be stretched to disengage the stuck fibers and clear local toxins, but trying to do this first usually results in painful retrenching.
- Use manual feedback over muscles that are presenting as prominent limiters as range increases, including over referral zones. This turns off the normal tendency of the body to shut down motion by distracting the danger signals.
- Use regional motion at first, progressing to larger integrative motion as muscle health is restored and the nervous system is trained out of habitual pain response limitations. Eventually progress to active ROM as the client feels safe.

### The CTB Approach: Self-Care

- During the bodywork phase, we're always educating, so the client learns the true sources of their pain. Consciousness and empowerment.
- We show them how to compress the important TrP areas, use MET to lengthen, and perform resolving stretches.
- Engagement in your own healing empowers the CNS to get and stay out of pain.



## The CTB Approach: Corrective Exercise

- Ultimately, the client must have balanced strength and posture for the muscles to remain healthy.
- We show sequences that strengthen but also incorporate MET into the exercise. This immediately lengthens fibers that may have begun to shorten or develop TrPs due to temporary overload.
- We incorporate our knowledge of functional anatomy and trigger point therapy into each exercise.

