By Victoria Ross and Chuck Selvaggio

Each issue highlights a specific muscle or group of muscles, and presents techniques to restore muscles from a compromised state to optimal health.

Anterior Deltoid

The anterior deltoid muscle is very influential to the status of the shoulder girdle/arm "unit." Many problems that occur in that unit result from the compromised health of the anterior deltoid muscle—as do problems that occur in other areas of the body which compensate when this muscle is distressed.

The anterior deltoid is a hidden key to unlocking many shoulder/arm problems. Both the anterior and posterior deltoids act like slings against gravity, which maintains the position of the arm (humerus) up into the ball-and-socket joint. The anterior deltoid, however, carries a much greater part of the load than the posterior deltoid does, because tensions tend to exacerbate along the flexor pathway of the shoulder girdle/arm unit rather than along the extension pathway.

The shoulder/arm unit is highly mobile, allowing for more flexibility than any other single area of the body. The arm can move not only in its ball-and-socket joint, but also in multiple, additional dimensions as the bones of the shoulder girdle lift. The whole unit attaches to the body at the tiny, insignificant-looking sternoclavicular joint. When in a healthy state this design permits amazing flexibility. When distressed, it can accommodate many painful land mines buried in the complexity of soft-tissue attachments.

In addition, the potential for subluxation (a partial or incomplete dislocation) of the joints along the entire pathway of this highly mobile unit is high, which creates an added challenge for the therapist attempting to make long-lasting corrections. Since the deltoids can quietly interfere with the stability of both the shoulder and the arm, the need to keep the anterior deltoid free of fascial restrictions is great.

Any time the anterior deltoid becomes inflamed, it leaves behind adherencies both within its bundles of muscle fibers and adherencies to adjacent soft tissue and bone, such as the coracobrachialis, pectorals, humerus, lateral clavicle, and the connective tissue over the ball-and-socket joint itself. (Adherencies are tissues in a state of being stuck, or attached, to each other—but not as seriously as in the case of scar tissue.)

Adherency at the anterior deltoid immediately reduces the range of motion of the ball-and-socket joint and compromises the stability of the entire complex of joints and soft tissues in the unit. Each subsequent bout of inflammation followed by adherency further reduces the unit's range of motion, and increases the potential for pain anywhere in the arm and shoulder

Pfrimmer Explained

Pfrimmer Deep Muscle Therapy is the total-body corrective muscle therapy system developed by Therese C. Pfrimmer, of Ontario, Canada, in the 1940s (for a detailed description of the therapy, see "Pfrimmer Deep Muscle Therapy," Issue #74, July/Aug. 1998). Her comprehensive and highly refined technique of specific cross-fiber strokes works effectively to restore muscles and prevent various muscle/soft tissue conditions.

The study and application of Pfrimmer Deep Muscle Therapy consists of two important corrective phases: 1) The total-body sequence of general corrective strokes; and 2) The localized spot work of specific corrective strokes called Pfrimmer Muscle Isolation.

For further information about Pfrimmer Deep Muscle Therapy, contact the Pfrimmer Institute at P.O. Box 150918, San Rafael, CA 94915-0918, (888) 355-2698, or visit its web site at www.pifor-cmt.com

unit. As previously mentioned, anterior deltoid involvement can be either the cause or the result of problems anywhere along the entire shoulder/arm unit pathway. It is often overlooked as the culprit because it is more often a quiet partner to pain.

It is important to note that many people work day-to-day with small, unnoticed subluxations in the arm or shoulder joints. This immediately predisposes such people to soft-tissue distress in the arm and shoulder, which causes further subluxations along the unit pathway. This vicious cycle is complex for the muscle therapist to correct and stabilize; however, long-lasting correction is unlikely without the soft-tissue corrections performed by a skilled muscle therapist.

Causes

Why does distress occur along the shoulder/arm pathway? In addition to repetitive movements—which can include things like using a computer, writing, drawing, bartending, hairdressing, scrubbing, and any sport that involves the arms—a generous list of additional factors must be noted, including: structural imbalances; carrying a purse on one's shoulder; diseases affecting the joints, such as arthritis; major injuries and minor traumas; and accommodation and compensation for pain.

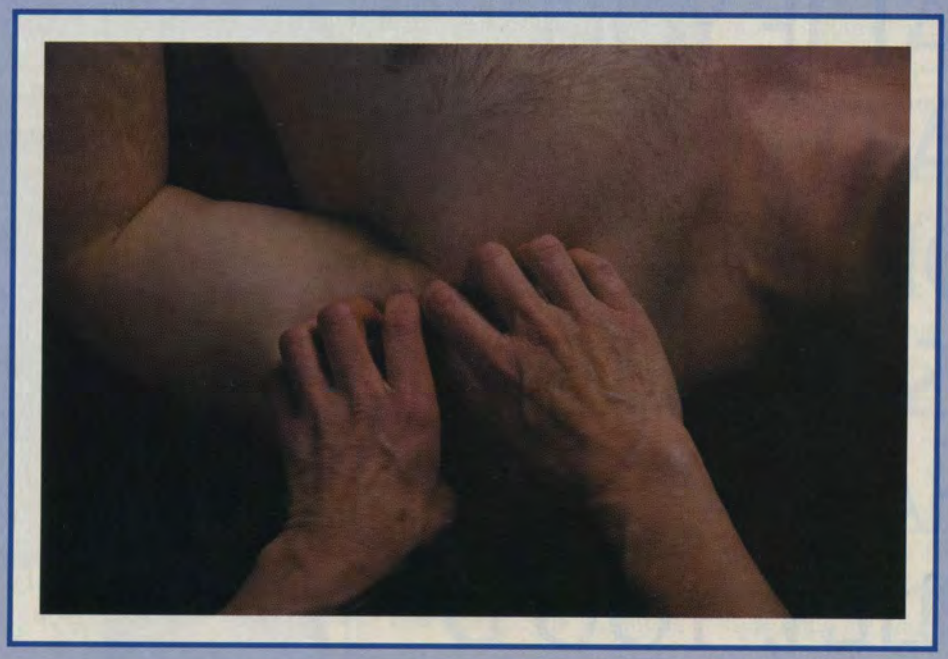
In addition, thought-induced tensions tend to hike the shoulder girdle up toward the ears, and emotional issues tend to draw the flexor pathway of the shoulder/arm unit into sustained contraction, forming a protective posture.

Chronic systemic conditions such as lupus, fibromyalgia and chronic fatigue syndrome combine many of the physical, mental and emotional reasons for pain in the shoulder/arm unit. (Massage therapists are particularly vulnerable to the occupational factors for anterior deltoid involvement, so proper body mechanics are a must, especially when using the arms to apply pressure to a client's body.)

Solutions

During the administration of the basic Pfrimmer corrective sequence, emphasis and focus are given to the anterior deltoid muscle. Palpation of the muscle during the general corrective phase may reveal inflammation, toxic congestion, adherency to joint or soft tissue, fibrousness, fiber separation (stringiness) and/or muscular dry-

How to Apply Pfrimmer Muscle Isolation to Anterior Deltoid



1. Stand at an angle above your client's shoulder.
2. Position your eight fingers in a row along the length of the anterior deltoid (the 5th finger of one hand should be against the clavicular attachment at the proximal end, and the 5th finger of the other hand should be on the deltoid tuberosity attachment point at the distal end of the muscle).
3. Compress the muscle to flatten it with your fingers and then work (push slowly) directly across the fibers with all your fingers at once.
4. Return back across the fibers while maintaining the same pressure with all your fingers.
5. Repeat this move several times until the top surface of the muscle feels restored (usually, moist and free of stringiness and restrictions), giving special attention to detail at the attachment areas.
6. Hook your fingers gently around the anterior border of the anterior deltoid (at the edge of the axilla) and allow the pads of your fingers to press gently up against the underbelly of the anterior deltoid.
7. Work the underside of the anterior deltoid by gently pressing up against the fibers and very slowly moving back and forth across the fibers with special care not to snap, or "twang," the muscle.
8. To release the underbelly of the muscle from any restrictions to the ball-and-socket joint, humerus, etc., hook your fingers under the anterior border of the axilla again and lift (gently jerk) the underbelly away from the underlying tissues. If the client is supine, your hand movements would be toward the ceiling.
9. A simple passive or active range-of-motion circumduction may be performed at this point to assess your progress in freeing the fascial restrictions in the anterior deltoid.

This work often yields more than what was anticipated, as the soft tissues and bones under the anterior deltoid house attachments for the whole complex of additional muscle fibers and connective tissues mobilizing the shoulder/arm unit. Invariably, other joints and soft tissues of the unit are involved and require the therapist's attention, one by one.

Additional areas include soft tissue distress surrounding any and each joint of the hand, wrist and elbow; the ball-and-socket joint; the rotator cuff; the acromioclavicular and sternoclavicular joints; and the forearm flexors and extensors; biceps and triceps; and the anconeus, subclavicular, pectoral, trapezius, and rhomboid muscles. Finally both right and left shoulder girdles must be corrected and balanced in order for the total shoulder unit correction to remain stable.

NEXT ISSUE: Gluteus Minimus

ness, in addition to simple tension. To further address corrective moves for the shoulder/arm unit, the client's arm and the therapist's body should both be situated in a comfortable position. At this point, the Pfrimmer Muscle Isolation technique is applied to the anterior deltoid (see "How To Apply Pfrimmer Muscle Isolation to Anterior Deltoid," page 104).

The technique described here can oftentimes take the muscle from a compromised state to optimal health. More than one session would be warranted if: 1) The whole shoulder girdle has multiple muscular adherencies that pull the shoulder/anterior deltoid out of balance after the first treatment; 2) An inflammatory condition, such as arthritis, lupus or myositis, exists; 3) A degenerative disease, such as muscular dystrophy or amyotrophic lateral sclerosis, exists; or 4) The client continues the same occupational movements without correcting his or her body mechanics. *M*

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Pfrimmer, Therese C. *Muscles—Your Invisible Bonds,* 1970, Blyth Printing, Blyth, Ontario, Canada.

Please note

The material presented in this article is not a substitute for hands-on training. Readers should self-assess to make sure they have sufficient education and experience to understand the information presented here and to safely perform the described technique.