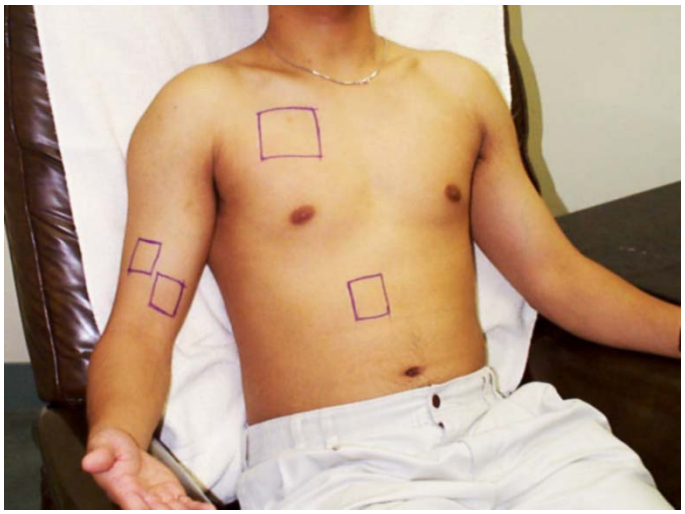
REFLEX NECK SYNDROME

The cause of the *reflex neck syndrome* is uncertain. Most of the patients who have demonstrated it have usually been active people, not regularly engaged in physically demanding exercise programs, but who have in recent history performed very strenuous and physically demanding upper extremity activities. This syndrome generally appears symmetrically (on both sides of the body) but notable exceptions have shown it only on one side. The suffering patient usually complains of pain in the posterior cervical neck and (usually) in the superior posterior aspect of the shoulder occupied by the middle and upper trapezius muscles, and of decreased lateral rotation range of motion of the head.

The oddest characteristic of the *reflex neck syndrome* is that with a DSR survey, no inflammation is usually found to be present in any of the posterior cervical or upper thoracic structures normally associated with cervical neck or posterior shoulder pain. Instead, inflamed zones can be located over the trigger point sites of the pectoralis, biceps brachii, and upper rectus abdominis trigger point sites (as illustrated below). To further confirm the presence of the reflex neck syndrome, one need only apply direct pressure into the involved trigger points. If the syndrome is present, an immediate increase of lateral rotation range of motion will be observed by the patient, in spite of the extreme pain experienced from the trigger point sites themselves.

What we presume happens is that the trigger points involved combine their referred pain patterns to produce the nagging pain neck and shoulder pain and *reflexly* the patient unconsciously tightens up the rotators of neck, thereby restricting lateral rotation range of motion and increasing the perceived pain.



The high skin resistance patterns commonly associated with the Reflex Neck Syndrome, demonstrated asymmetrically

Treatment

The treatment of the *reflex neck syndrome* is directed at relieving the involved trigger points by resetting them electrically, breaking any adhesions that are present, and by eliminating any associated inflammation.

Application:

- Place a negative electrode over the pectoralis major trigger point sites, and positive split-leaded electrodes over the biceps brachii and upper rectus abdominis trigger point sites. Set an electrical stimulation unit to deliver a visible contraction, at 7 Hz, and stimulate for a 10-minute period. Then set the electrical to deliver a medium frequency current, with a duty cycle of 10-seconds on and 10-seconds off, sufficient to produce a visible near tetanic contraction of the involved muscles, and stimulate for a 10-minute period.

- Manipulate the soft tissues within and around the inflamed zone(s) to break any adhesions that are present.

- Preset the ultrasound unit at 3 (or 3.3) MHz pulsed waveform, at 1.8 W/cm^2. Ultrasound each inflamed zone, utilizing an effective non-steroidal anti-inflammatory as a coupling agent, for six minutes. This procedure is designed to soften the adhesions that may be are present.

The following treatment forms have also proven to be effective.

Variation:

- Preset the ultrasound unit a 3 (or 3.3) MHz pulsed waveform, at 1.8 W/cm^2. Ultrasound the inflamed zones, utilizing an effective non-steroidal anti-inflammatory as a coupling agent, for six minutes. This procedure is designed to soften the adhesions that may be are present.

- Manipulate the tissues in and around the inflamed zones to eliminate any adhesions that may be present.

- Twenty minutes after the first ultrasound, preset the ultrasound unit to deliver a 3 (or 3.3) MHz pulsed waveform, at 1.5 W/cm^2. Ultrasound the inflamed zones utilizing an effective non-steroidal anti-inflammatory as a coupling agent, for six minutes. This is performed to "cool off" the manipulated zone by effectively halting the production of prostaglandins by the stressed tissues.

- Apply mechanical vibration, delivered at 60 to 120 Hz, to the origin, insertion, or tendon of the muscles associated with the inflamed zone, for two minutes. Apply the vibration at a relatively high but tolerably comfortable level for the patient. This is performed to increase capillary circulation in the involved tissues.

Variation:

- Preset the ultrasound unit a 3 (or 3.3) MHz, pulsed waveform, at 1.8 W/cm^2. Ultrasound the inflamed zones, utilizing an effective non-steroidal anti-inflammatory as a coupling agent, for six minutes. This procedure is designed to soften the adhesions that may be are present.

- Manipulate the tissues in and around the inflamed zones to eliminate any adhesions that may be present.

- Apply cold laser (with or without simultaneous electrical stimulation provided by the laser applicator) to the inflamed zones for approximately 6 minutes. This is performed to "cool off" the manipulated zone by effectively halting the production of prostaglandins (or facilitating enzyme destruction of **all** of the inflammatories being produced) by the stressed tissues.

- Apply mechanical vibration, delivered at 60 to 120 Hz, to the origin, insertion, or tendon of the muscles associated with the inflamed zone, for two minutes. Apply the vibration at a relatively high but tolerably comfortable level for the patient. This is

performed to increase capillary circulation in the involved tissues.

Trigger Points

The following trigger point formations may, singly or in combination, imitate or contribute to the pain associated with the *reflex neck syndrome*: Masseter (deep), Posterior digastric, Upper trapezius [A], Upper trapezius [B], Middle trapezius [A], Middle trapezius [B], Posterior cervical group, Levator scapulae, Lower splenius cervicis, Lower trapezius [A], Lower trapezius [B], Cervical multifidus (C4-C5). Levator scapulae, Scalenus, Infraspinatus, Lower splenius cervicis, Cervical multifidus (C4-C5), Supraspinatus (muscle), Serratus posterior superior, Subscapularis, Posterior deltoid, Rhomboids, and Triceps (long head).