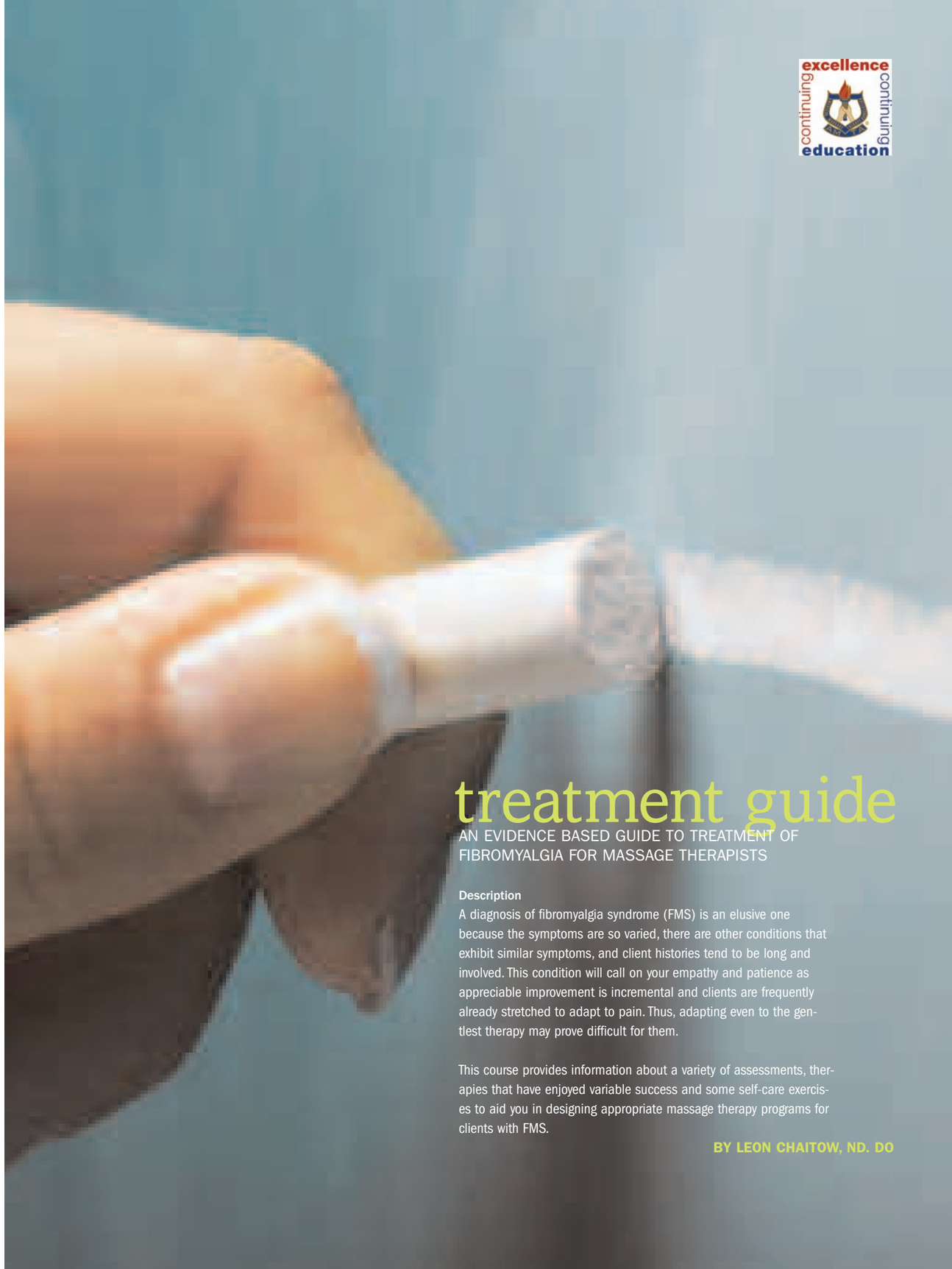

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treatment guide

AN EVIDENCE BASED GUIDE TO TREATMENT OF FIBROMYALGIA FOR MASSAGE THERAPISTS

Description

A diagnosis of fibromyalgia syndrome (FMS) is an elusive one because the symptoms are so varied, there are other conditions that exhibit similar symptoms, and client histories tend to be long and involved. This condition will call on your empathy and patience as appreciable improvement is incremental and clients are frequently already stretched to adapt to pain. Thus, adapting even to the gentlest therapy may prove difficult for them.

This course provides information about a variety of assessments, therapies that have enjoyed variable success and some self-care exercises to aid you in designing appropriate massage therapy programs for clients with FMS.

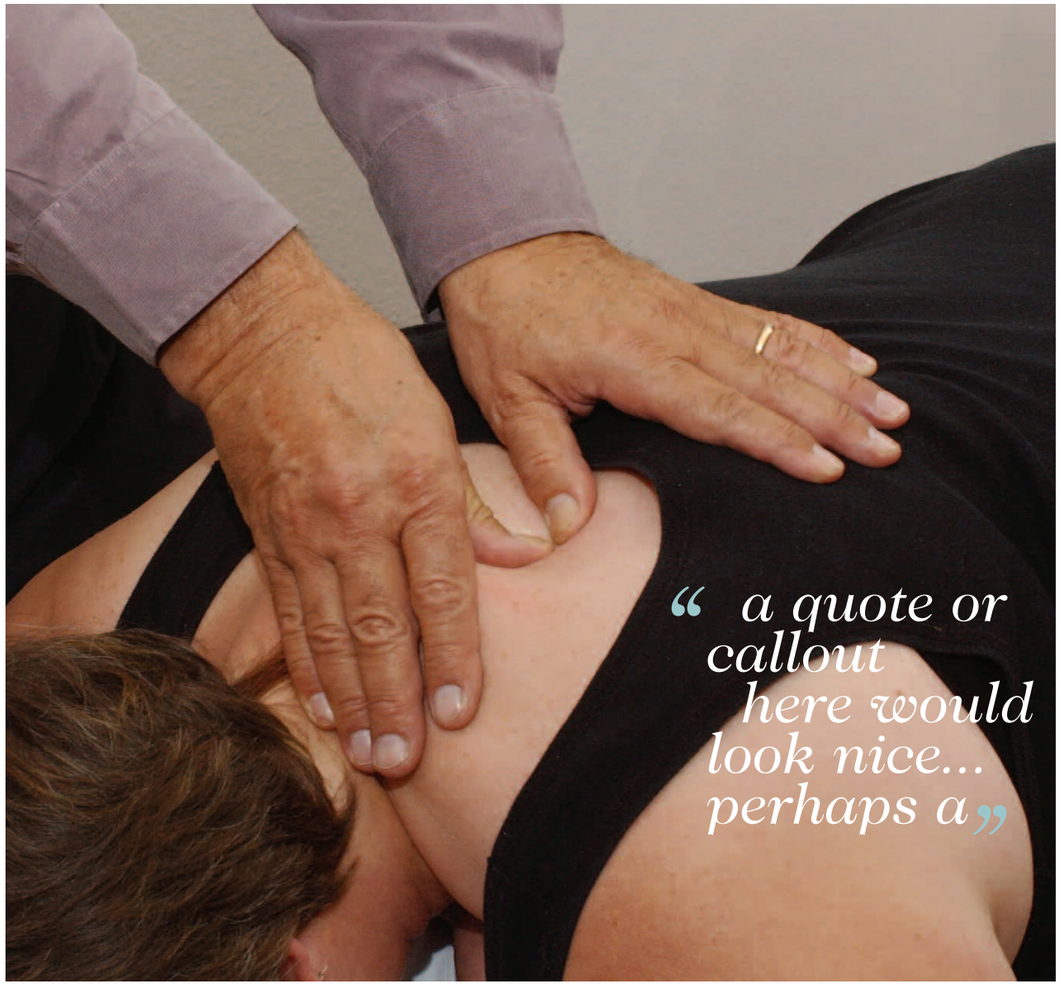
BY LEON CHAITOW, ND. DO

COURSE OBJECTIVE

This course explores functional definitions of fibromyalgia syndrome (FMS), therapies that have been shown to help some clients and a summary of biomechanical approaches. When you have completed this course you will be able to:

* Explain why fibromyalgia is difficult to define and understand the population it affects in the United States.
* List two symptoms and four conditions that cause confusion when diagnosing FMS.
* Explain why you must balance therapy choices with awareness of the adaptations already ongoing in the client with FMS.
* Describe five whole-body or wellness treatments for FMS.
* List five objectives for massage therapists treating FMS clients.
* Describe how biomechanical and whole person approaches help alleviate the symptoms for an FMS client with examples of MET, skin and self-treatments.

CONTACT HOURS:



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FMS Clients and Symptoms

The range of symptoms for fibromyalgia syndrome (FMS) include widespread pain, fatigue, severely disturbed sleep and, all too often, digestive system distress. The pain and distress of a person with FMS is, however, not always obvious as there may be an attempt to display an outer calm, despite the inner anxiety and turmoil. In contrast, other patients with FMS all too clearly show the suffering they are enduring.

Surveys by the Fibromyalgia Network, a patient support organization, have shown that many clients wait years for a diagnosis and may have consulted a lengthy list of physicians, practitioners and therapists before they are officially labelled with the condition.[1]

It is worth remembering that the first time you see the FMS client in your office is most likely not the first time that individual has tried to explain the level of her pain and illness to someone. You may need to draw on all your compassion and empathy as you carefully note the history, present symptoms and the associated information regarding past and present treatment methods and outcomes.

It is important to keep the presentation of the symptoms process—along with the history, often involving multiple life-events and influences—from being delivered in a jumbled and uncoordinated manner. Keeping the FMS client focused on a logical sequence of background information is not always easy, and it is important to note those aspects of the story that carry the most emphasis and emotion.[2]

A gentle firmness may be needed to redirect the individual. You can try using phrases such as, “That’s interesting and I am sure we’ll have time to discuss it, but so I don’t lose track of the information I am looking for right now, please answer the last question I asked you.”

Defining FMS

Fibromyalgia syndrome affects between 2 and 5 percent of the U.S. population, which is roughly 6 to 15 million people. Most FMS clients are women aged 25 to 50.[3] Yet the definition of FMS has a number of variations.[4]

The American College of Rheumatology (ACR) defines of FMS[3] as when there is:

A history of widespread pain for at least three months. Pain is considered widespread when all of the following are present:

* Pain in the left side of the body;
* Pain in the right side of the body;
* Pain below the waist;
* Pain above the waist;
* Axial pain (cervical spine or anterior chest or thoracic spine or low back).
* Pain (with the patient reporting pain and not just tenderness) in 11 of 18 tender point sites with 4 k of digital pressure. The sites are all bilateral and are situated:
* At the suboccipital muscle insertions (close to where rectus capitis posterior minor inserts);
* At the anterior aspects of the intertransverse spaces between C5 and C7;
* At the midpoint of the upper border of upper trapezius muscle;
* At the origins of supraspinatus muscle above the scapula spines;
* At the second costochondral junctions, on the upper surface, just lateral to the junctions;
* Two centimeters distal to the lateral epicondyles of the elbows;
* In the upper, outer quadrants of the buttocks in the anterior fold of gluteus medius;
* Posterior to the prominence of the greater trochanter (piriformis insertion);
* On the medial aspect of the knees, on the fatty pad, proximal to the joint line.

In 1992, a consensus document on FMS was produced at the Second World Congress on Myofascial Pain and Fibromyalgia in Copenhagen.[5] This declaration added a number of symptoms to the ACR definition including:

* Persistent fatigue;
* Generalized morning stiffness;

A brief background to some of the many forms of FMS would include:

GENETIC PREDISPOSITION—there is strongly suggestive evidence in some cases that there is an inherited tendency toward the development of FMS (as there is to hypermobility);[xxii] [xxiii]

HYPERMOBILITY—people who are hypermobile have a higher incidence of FMS;

POST-WHIPLASH—a subgroup of FMS clients (estimated at around 15 percent) have an obvious traumatic onset, often involving whiplash, 3 to 12 months before the onset of FMS symptoms;

BIOCHEMICAL—for many people with FMS the background appears to be biochemical, including factors such as toxicity xxiv, gut dysbiosisxxv, hormonal (particularly thyroid) imbalancexxvi and nutritional deficiency;[xxvii]

PSYCHOSOCIAL/PROLONGED STRESS[xxviii]—research supports suggestions that there is in many, but not all, cases of FMS a pivotal role for chronic stress.[xxix]

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"Appropriately applied massage therapy has been shown to have the potential to ease the pain and distress of most chronically painful conditions"

Simple Division of FMS[30]

CLASSICAL-FMS
Sleep disorder;
Anxiety;
Depression;
Altered brain & CNS chemistry;
Brain trauma.

PSEUDO-FMS
(disorders that may be misdiagnosed as FMS)

Organic diseases
(Lyme disease, hypothyroidism, forms of rheumatoid arthritis);

Functional disorders
(deficiency, toxicity, liver dysfunction);

Musculoskeletal disorders
(myofascial pain and hypermobility syndromes).

***NOTE** Though massage therapists cannot diagnose FMS in their clients, this overview is given to help therapists gain an understanding of where their FMS clients are coming from.

To read additional content from this course, visit
www.amtamassage.org/journal/

Confusion in Diagnosing FMS

Because there are no clear laboratory procedures that can identify FMS, and because the condition is associated with a cluster of variable symptoms, diagnosis remains a problem. A number of complex conditions exist that have symptom patterns similar to those observed in FMS, in particular:

CHRONIC MYOFASCIAL PAIN SYNDROME (MPS). This involves multiple active myofascial trigger points. Much of the pain experienced by people with FMS may derive from trigger points. This makes it important to be able to deactivate these as gently as possible to avoid aggravating the pain.[6,7]

CHRONIC FATIGUE SYNDROME (CFS). The symptoms of CFS are almost all those usually present in FMS, with greater emphasis on the fatigue elements, rather than the painful ones.[8] A difference between CFS and FMS may be noted by asking whether the person feels better or worse after exercise. If the person reports feeling better after exercise then FMS is more likely, as exercising with CFS usually aggravates the symptoms.

MULTIPLE CHEMICAL SENSITIVITY (MCS). Allergy or sensitivity to chemicals or foods is the main component of this disorder. The symptoms are likely to fluctuate, suggesting that the condition is not mainly systemic, but results from environmental factors.

POST-TRAUMATIC STRESS DISORDER (PTSD). The history of the client will commonly contain evidence of violent traumatic—physical or emotional—experiences that suggest PTSD as a contributory feature.NEEDS A REFERENCE

Because there are many similarities within MPS, FMS, CFS, MCS and PTSD, the accepted diagnosis for each client may be confusing and sometimes inaccurate. Many with these conditions can have several overlapping diagnoses—for example CFS and FMS.

Appropriately applied massage therapy has been shown to have the potential to ease the pain and distress of most chronically painful conditions, including FMS. Clients with these diagnoses can benefit from an enhanced ability to sleep and relax, better breathing and the effects of therapeutic and/or wellness massage.

Confusing Symptoms

Current research indicates that FMS is not primarily a musculoskeletal problem, although the muscles and joints are where the major symptoms are experienced. Eisinger et al., explained "Fibromyalgia is…characterised [sic] by widespread aching and points of tenderness associated with:

* Changed perception of pain;
* Abnormal sleep patterns;
* Reduced brain seratonin;
* Abnormalities of microcirculation and energy metabolism in muscle."[9]

However, the causes almost always lie elsewhere, and not in the tissues where the pain is being felt.

Disturbed sleep, a symptom of FMS, causes far more problems than fatigue. One of the functions of sleep during its deepest stages is production of the growth hormone (GH). GH performs many vital repair and regeneration tasks. It is also produced during aerobic exercise.

Laboratory findings for FMS include extremely low levels of GH. This directly affects manual and massage therapy because deep tissue work often micro-traumatizes tissues and, with reduced GH, the damage is slow to repair. Biopsy of the muscles of those with FMS (upper trapezius, in this case) resulted in reports of "moth-eaten, red-ragged fibres [sic]"—micro-tears that had not healed normally.[10]

Therefore, restoring sleep patterns and normal GH production through better sleep or more exercise is very important, as is the need to avoid traumatizing tissues by heavy therapy.

Client Adaptation and Therapy

A survey of evidence regarding what seems to help people with FMS offers further insight into the complex interaction between mind (emotion, anxiety, etc.), body (biomechanical features, including trigger points) and chemistry (toxicity, hormonal and other imbalances, deficiencies or allergies, etc.). The evidence of what seems to help the symptoms of FMS highlights just how important nonspecific, whole-person methods can be, including massage therapy.

Before the most important of these methods is examined, a brief mention is needed of how adaptation fits into the picture of chronic health problems like FMS.

When people are unwell and where repair functions have been stretched to their limits, even the gentlest therapy represents an additional demand for adaptation—the therapy is yet another stressor to which the person has to adapt.

Therefore, it's important that therapies are carefully selected and modulated to the client's current ability to respond. When symptoms are at their worst, simple interventions are appropriate, with time allowed for the body and mind to process and handle these changes or interventions.

It is worth considering general, whole body approaches. These could include such therapies as hydrotherapy, nonspecific wellness massage and relaxation methods, rather than specific interventions. These should be offered both in the initial stages and also during periods when symptoms flare up. Recovery from FMS is at best slow, and it is easy to make matters worse by excessive interventions.

Patience is required by both the health care provider and the client. Realistic therapeutic and educational methods that do not aggravate symptoms and offer the best chance of improvement should be used.

Massage Therapy and FMS

Research from the Touch Research Institutes indicates benefits from appropriate forms of massage for FMS.[11,12]

While many FMS clients request deep-tissue work, this is contraindicated based on what is known of the mechanisms involved in FMS. The most useful manual methods seem to involve nonspecific wellness massage and lymphatic drainage. Specific, targeted interventions that use aspects of soft tissue manipulation are also useful, especially gentle positional release and vibrational methods.

The removal or deactivation of myofascial trigger points and other local dysfunction by minimally invasive methods, combined with homeostatic enhancing approaches (nutrition, relaxation methods, hydrotherapy, etc.) would be additionally useful alongside massage therapy.

When massage and movement therapy were compared with relaxation and movement for working with FMS clients, there were far more benefits in the group receiving both massage and movement therapy. The greatest benefits were noted in areas of mood and depression, as well as in reduced pain levels.[12]

The objectives of the massage therapist might include all or any of the following:

* Easing anxiety and encouraging better sleep patterns;
* Deactivating trigger points;
* Improving general circulatory and lymphatic stasis;
* Recognizing and helping improve breathing pattern disorders;
* Improving muscular tone, function and balance.

How these objectives are achieved will vary, depending on the therapist's training and skills, as well as the severity and

Summary of Biomechanical Approaches to Chronic Pain Problems

EVALUATION OF PATTERNS OF USE

* Assessment of posture and use patterns in standing, walking, sitting, everyday activities (crossed syndromes for example) and, if appropriate, guidelines for improving these.

* Breathing pattern evaluation and, if appropriate, rehabilitation exercises.

* Assessment of Gross Musculoskeletal Dysfunction Spinal and joint mobility (looking for restrictions or hypermobility) with appropriate referral if treatment of spinal restrictions seems necessary.

* Sequential assessment and identification of shortened postural muscles, by means of observed and palpated changes, functional evaluation methods, etc.[13]

* Neurological imbalances (reflexes, etc.).

* Sequential assessment of weakness and imbalance in phasic muscles.

* Treatment of shortened muscles by means of muscle energy techniques (MET) or self-stretching to regain tone in antagonist muscles which have become inhibited. At the same time, additional toning exercise may be appropriate.

NOTE These gentle methods can be used on all painful muscles, or those housing trigger points. However, only upper trapezius is described and illustrated.

MET THERAPY OF UPPER TRAPEZIUS

The client lies supine with her head/neck side-flexed away from the side being massaged. The massage therapist stabilizes the shoulder with one hand and cups the ear/mastoid area of the same side of the head with the other.

In order to bring into play all the various fibers of the muscle, a stretch needs to be applied with the neck in three different rotation positions, coupled with side-flexing:

* With the neck side-flexed and fully rotated, the posterior fibers of the upper trapezius are involved in any contraction;
* With the neck fully side-flexed and half rotated, the middle fibers are accessed;
* With the neck fully side-flexed and slightly rotated back to the side from which it is side-flexed, the anterior fibers are worked on.

The client introduces a resisted effort to take the stabilized shoulder toward the ear (a shrug movement) and the ear toward the shoulder. The double movement (or effort toward movement) is important in order to introduce a contraction of the muscle from both ends. *The degree of effort should be mild and no pain should be felt.*

After roughly seven seconds of contraction and relaxation of effort, gently ease the client's head and neck into an increased degree of side-flexion, before stretching the shoulder away from the neck. Be sure to stabilize the client's head while doing this. Do this either to or through the new barrier of resistance, as appropriate. No stretch is introduced from the head-end of the muscle, as this could unduly stress the neck.

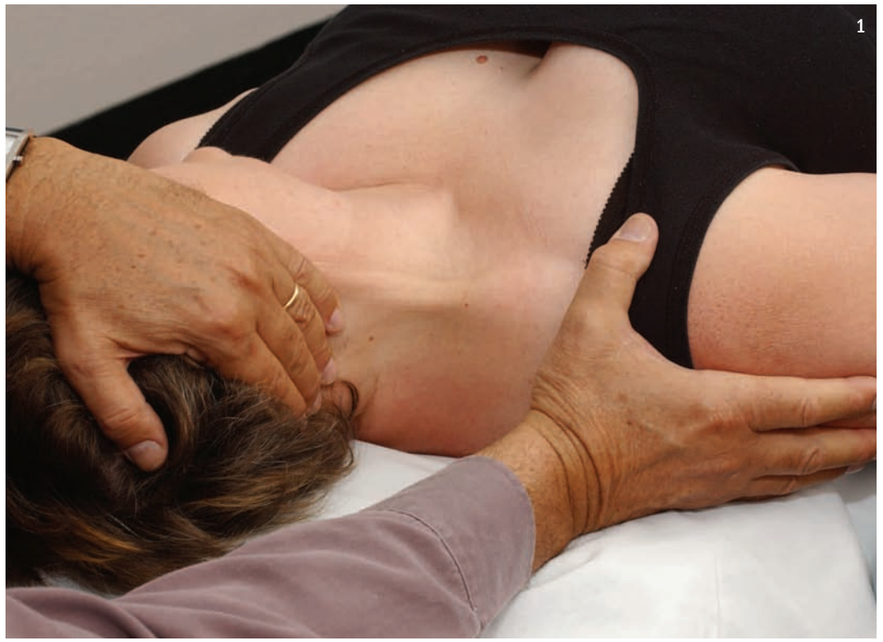
Lewit Alternative

Lewit suggests the use of eye movements to facilitate initiation of post-isometric relaxation before stretching, an ideal method for acute problems in this region.

With the client supine, fix the shoulder and the side-flexed (away from the side being worked on) head and neck, at the restriction barrier while the client looks with just her eyes (i.e., not to turn the head) away from side the neck is flexed. Have the client maintain eye movement as she holds her breath, as you resist the slight isometric contraction that these two factors (eye movement and breath) will have created.

Once the client exhales, take the head/neck to a new barrier; repeat this process. If you work with the shoulder, hold it firmly as the client lightly pushes it into a shrug. After a seven second shrug, the muscle will have released somewhat, and slack can again be taken out as the head is repositioned. Now, repeat this process.

FIGURE 1. POSTERIOR UPPER TRAPEZIUS STRETCH



The client's head is fully rotated and side-flexed (to an easy barrier) away from the side being worked on. At this time—with her neck and shoulder well supported—a light isometric contraction is introduced for five to seven seconds. Instruct the client to bring her ear and shoulder together using no more than 20 percent of her strength. After this, have the client relax and breathe out, easing their hands toward their feet as you ease the shoulder area inferiorly and slightly laterally to induce a stretch of the posterior fibers of the upper trapezius. This should be held for 30 seconds.

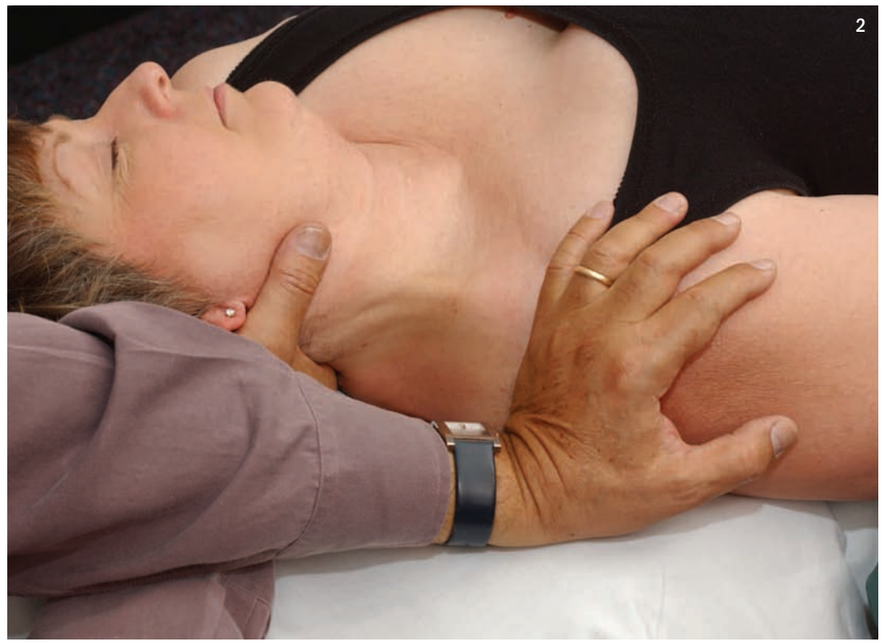


FIGURE 2. MIDDLE UPPER TRAPEZIUS STRETCH
Follow the same procedure as described in Figure 1, but this time make sure the client's head is half-rotated and fully side-flexed (to an easy barrier) away from the side being worked on. This induces a stretch of the middle fibers of the upper trapezius.

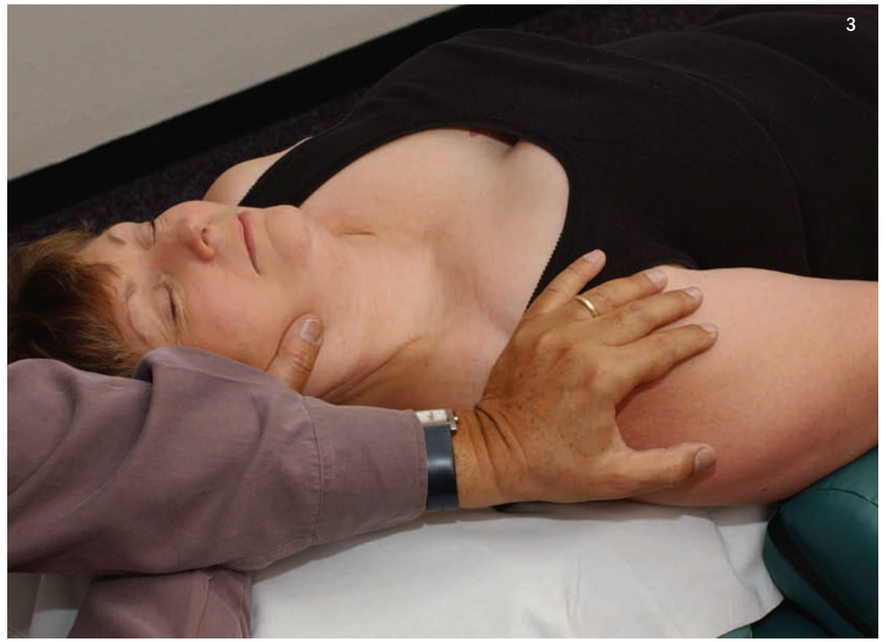


FIGURE 3. ANTERIOR UPPER TRAP STRETCH
Again, follow the same procedure as described in Figure 1, but this time the client's head is slightly rotated toward the side being worked on. This induces a stretch of the anterior fibers of the upper trapezius.

IDENTIFICATION OF LOCAL DYSFUNCTION

* Off-body scan for temperature variations (cold may suggest ischemia, hot may indicate irritation or inflammation);[14]
* Evaluation of skin and fascial adherence to underlying tissues, indicating deeper dysfunction.
* Assessment of variations in local skin elasticity, where loss of elastic quality indicates hyperalgesic zone and probable deeper dysfunction (e.g., trigger points) or pathology.[15]
* Evaluation of reflexively active areas (trigger points, etc.) by means of very light single-digit palpation seeking the phenomenon of drag.
* NMT palpation utilizing variable pressure, which "meets and matches" tissue tonus.[16]

Palpation and Skin Therapy

Over an area of acute or chronic dysfunction, the skin will feel tense and be relatively difficult to move or glide over the underlying structures (i.e., there will be greater adherence between the skin and the underlying fascia). When overlying reflexively active areas such as trigger points (or active acupuncture points), a "drag" sensation may be palpated as the skin is lightly stroked. This is due to increased hydrosis resulting from increased sympathetic activity.

You will notice an apparent undulation sensation, a rising and falling, palpable with an extremely light stroke. This is described illustratively as "hills and valleys." In traditional Chinese medicine, hills are areas of energy (chi) congestion, while valleys represent chi deficit. The drag sensation indicates where dysfunction exists.

The skin will also lose some elasticity, so that on light stretching (easing an area of skin to its easy resistance barrier by placing two fingers touching and separating and taking the underlying skin with them) it will feel less elastic than nearby skin. Research also has shown that in addition to differences in red blood concentrations, the temperature of the skin above nearly all tender points found in clients with FMS decreases when compared to normal skin. This suggests vasoconstriction.[17]

These reflex changes can be treated worked on with gentle mini-myofascial release or local positional release methods. The tissues will also benefit from massage and/or lymphatic drainage.

Whole-body Approaches

* Wellness massage and/or aromatherapy
* Hydrotherapy
* Cranial techniques
* Therapeutic touch, reiki
* Lymphatic drainage
* Enhanced nutritional status

THERAPY FOR LOCAL AND WHOLE MUSCLE PROBLEMS

* Tissues held at elastic barrier to await physiological release (skin stretch, myofascial release techniques involving C or S bend methods, or direct lengthening approaches, gentle NMT, fascial release methods etc.);
* Use of positional release (PRT) methods – holding tissues in "dynamic neutral" (strain/counterstrain, functional technique, induration technique, etc.);[xviii]
* Muscle Energy (MET) methods for local and whole muscle dysfunction involving variations on the use of isometric and isotonic contractions as well as pulsed MET variation;[xix]
* Vibrational techniques (rhythmic/rocking/oscillating articulation methods, mechanical or hand vibration).
* This treatment initiates deactivation of myofascial trigger points (if sensitivity allows) utilizing Integrated Neuromuscular Inhibition techniques (INIT) or other methods (acupuncture, ultrasound, micro current).[20]

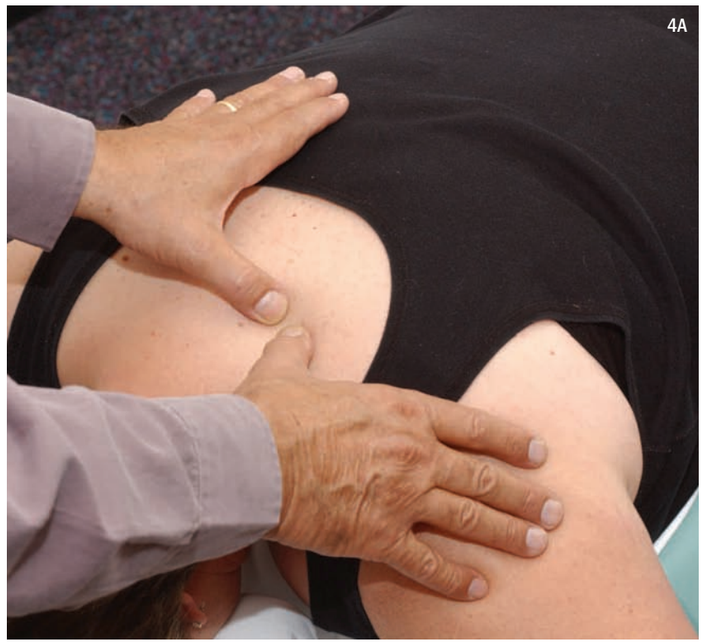


FIGURE 4A
The thumbs are placed on either side of an area of local dysfunction (possibly a trigger point, or possibly simply a local area of local contraction or fibrosis). The superficial tissues (skin on fascia) are taken to their resistance barriers in opposite directions, introducing an "S" shaped stretch.

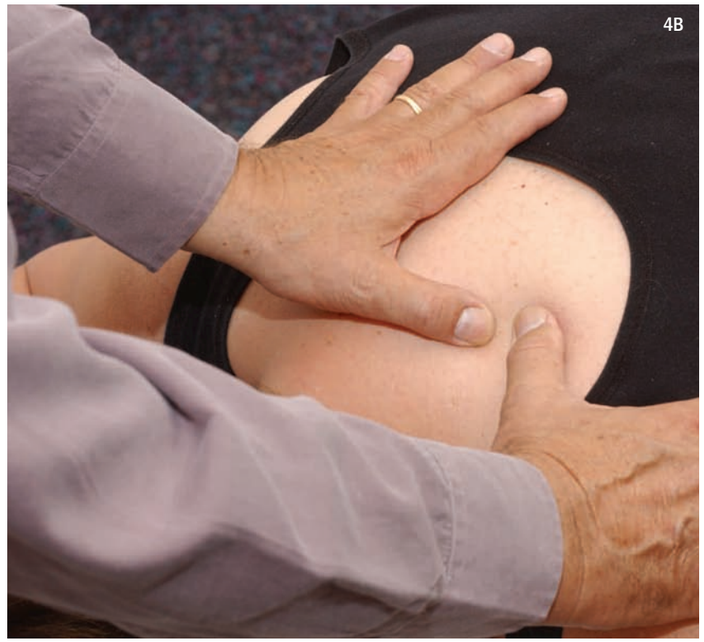
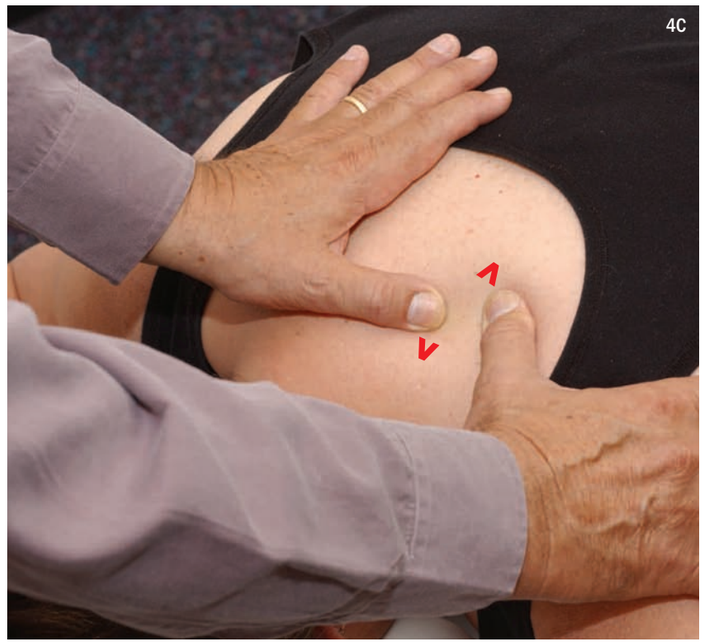
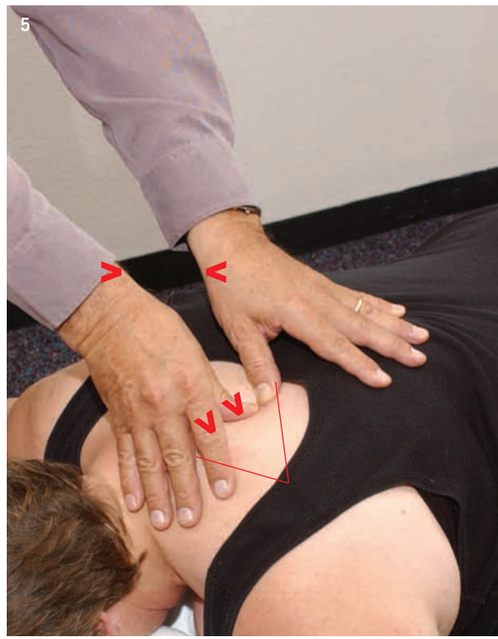


FIGURE 4B
After 10 to 15 seconds the tissues should start to release and the thumbs follow this to the next barrier.

FIGURE 4C
After another 10 to 15 seconds, this should release further. This is a mini-myofascial release.

FIGURE 5
The thumbs are placed alongside each other—at right angles to a local area of soft tissue dysfunction. The tense tight segment of the paraspinal musculature is illustrated here. With the arms straight, and using a light but firm degree of force generated by bodyweight and not hand strength, the tissues are "pushed" to their elastic barrier. By gently drawing together the wrists, a further degree of force enters the tissues as they distort into a "C" shape. This is held for up to 30 seconds as the tissues slowly release as in any myofascial release treatment.





INIT DEACTIVATION OF TRIGGER POINTS

An active trigger point—one that reproduces symptoms the client is familiar with when it is pressed—is compressed, either in a sustained or intermittent manner (five seconds pressure/two seconds release) until the pain modifies (usually after a minute or so). This trigger point release is followed by a moderate digital pressure applied to the trigger point. Ask the client to rate the pain on a scale of 1 to 10.

Next, the tissues should be eased so that the pain reduces by at least 70 percent. This is held for roughly 20 seconds. Have the client introduce isometric contraction into the tissues and hold it for 7 to 10 seconds. This contraction involves the precise fibers that were repositioned to obtain the positional release.

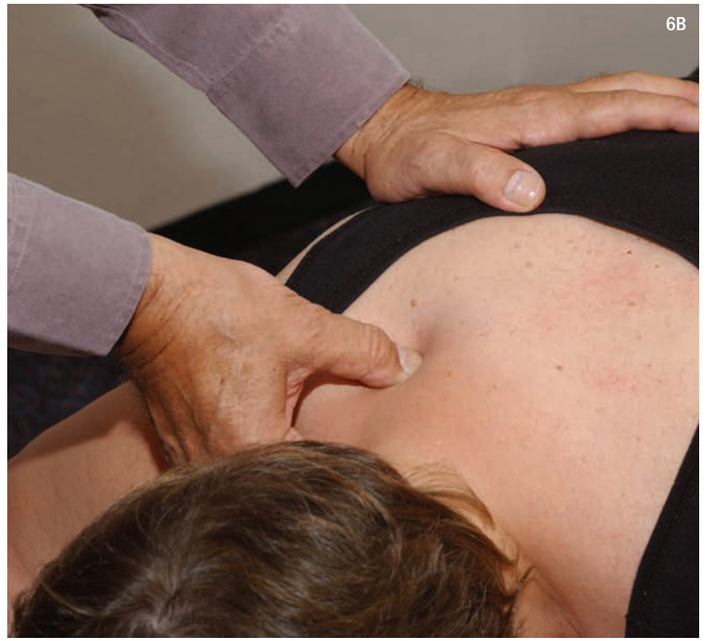
This produces (following the contraction) a reduction in tone in these tissues. The hypertonic or fibrotic tissues surrounding the trigger point can then be gently stretched as in any muscle energy procedure so that the specifically targeted fibers are stretched.

Following this, the entire muscle can be stretched, restoring the muscle housing the trigger point to its normal resting length. This is a prerequisite of trigger point deactivation.[21]

FIGURE 6A-6M: INIT DEACTIVATION SEQUENCE

FIGURE 6A
Locate an area of increased hydrosis by using very light (skin on skin) palpitation. This indicates underlying increased sympathetic activity, and the possible presence of a trigger point. Light compression identifies whether this is an active point (i.e,. the client recognizes the discomfort generated by pressure as being part of her symptom picture) and therefore whether it requires deactivation.

For more information about fibromyalgia, go to **www.???.com.**



Re-education/ Rehabilitation Approaches

* Self-applied positional release and/or muscle energy methods (i.e., pulsed MET) can be useful in acute and painful conditions where a sustained contraction may be painful or difficult to perform, as it is with FMS.

It requires the dysfunctional tissue or joint be held at its resistance barrier, at which time the client—ideally against your resistance—introduces a series of rapid (two per second) very small efforts toward the barrier.

Following a series of 20 contractions in 10 seconds, the slack should be taken up and the new barrier engaged. Begin another series of contractions from this new barrier.

Apart from releasing hypertonicity, the effects can include improved oxygenation and enhanced venous and lymphatic circulation through the area being treated.

* Postural (i.e., Alexander Technique)
* Breathing retraining

* Aerobic fitness training
* Gentle yoga-type stretching, tai chi
* Deep relaxation methods (e.g., autogenic training)

FIGURE 6B
Compression of the point is introduced to create what the client perceives as a discomfort to the level of at least a 7 on a 10-point scale. This pressure is either sustained until the level of perceived pain drops, at which time pressure is increased to raise it again to 7. Or a "make and break" pattern of pressure is introduced—five seconds of pressure followed by two seconds of release, repeated until the discomfort changes significantly (usually after a minute or so). This segment of the integrated sequence, involving sustained or intermittent pressure, can be omitted if the client is particularly sensitive, in which case the positional release segment should be introduced at this time.

FIGURE 6C
The Algometer
It is often useful to discover precisely how much pressure is being used to cause the trigger point to fire sufficiently to reproduce the client's symptoms. This can then be compared with the amount of pressure required at the next client visit (if more pressure is needed next time, the trigger point is partially or totally deactivated). An algometer, which is a spring-loaded pressure gauge, as shown in this image, is an easily used tool that can provide this information.

FIGURE 6D-6E: PRT

Figure 6d: In order to introduce the positional release segment of the INIT sequence, thumb pressure is applied to the trigger point in order to achieve a level of discomfort that the client can rate as having a value of 10 on a 10-point scale.

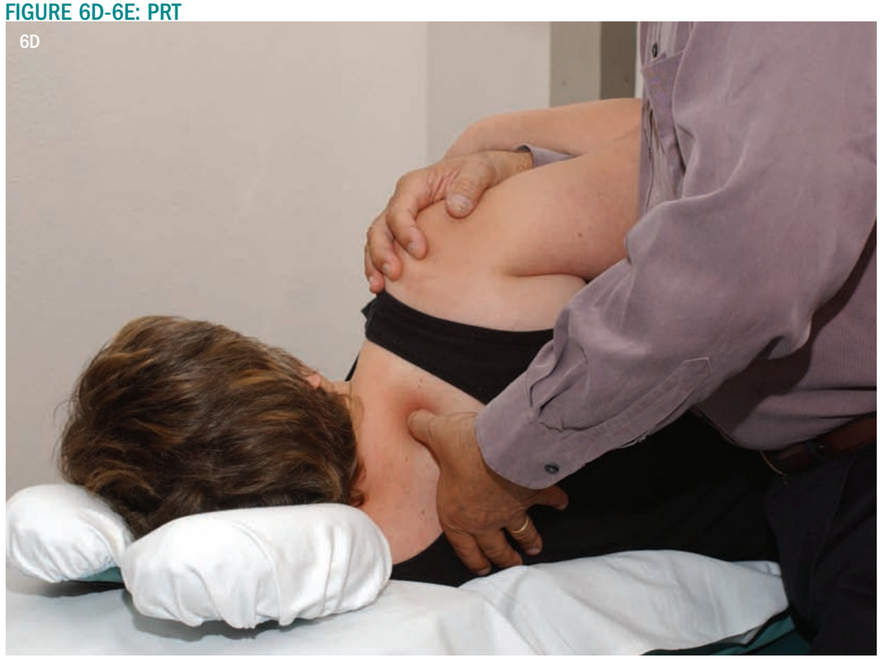
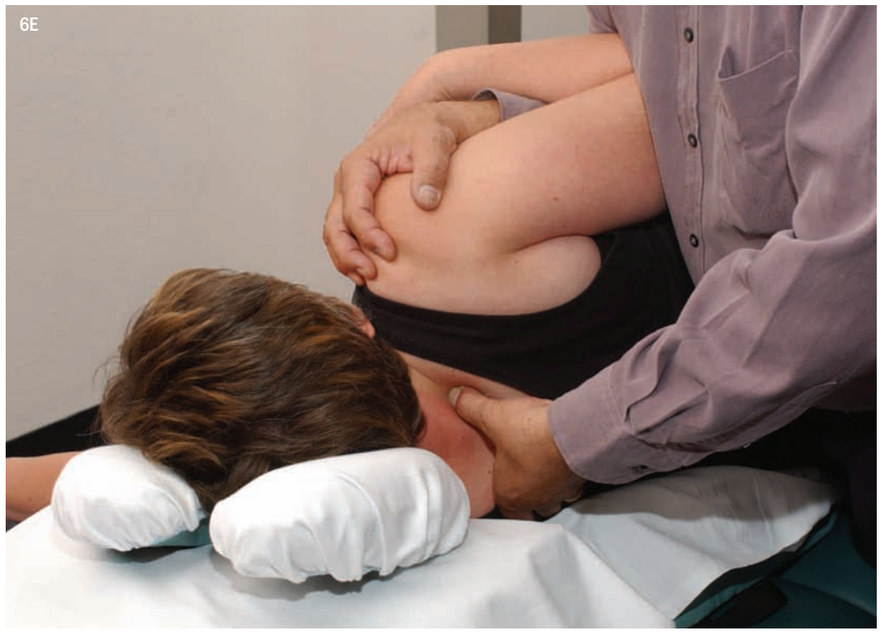


Figure 6e: This level should be rapidly reduced by a painless positioning (usually a crowding) of the tissues surrounding the trigger point ("fold and hold") until the value ascribed by the patient to the pain is a 3 or less. This is an osteopathic positional release method (strain/counterstrain). The position of ease is held for 10 to 15 seconds, at which time the client is asked to introduce an isometric contraction by voluntarily bunching the already "folded" tissues for 5 to 7 seconds.



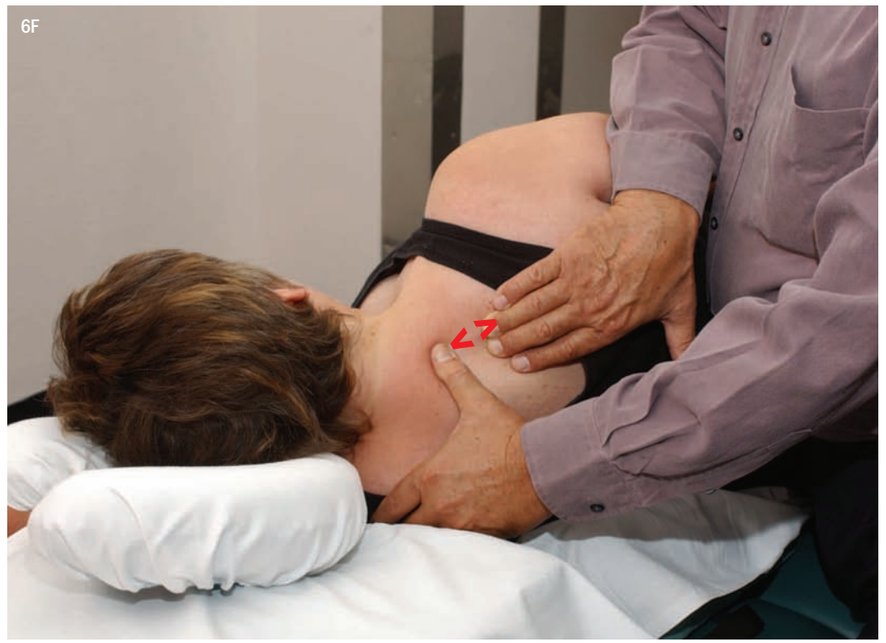


Figure 6f: local muscle stretch Immediately following the contraction, the tissues surrounding the trigger point are stretched locally for at no less than 30 seconds.

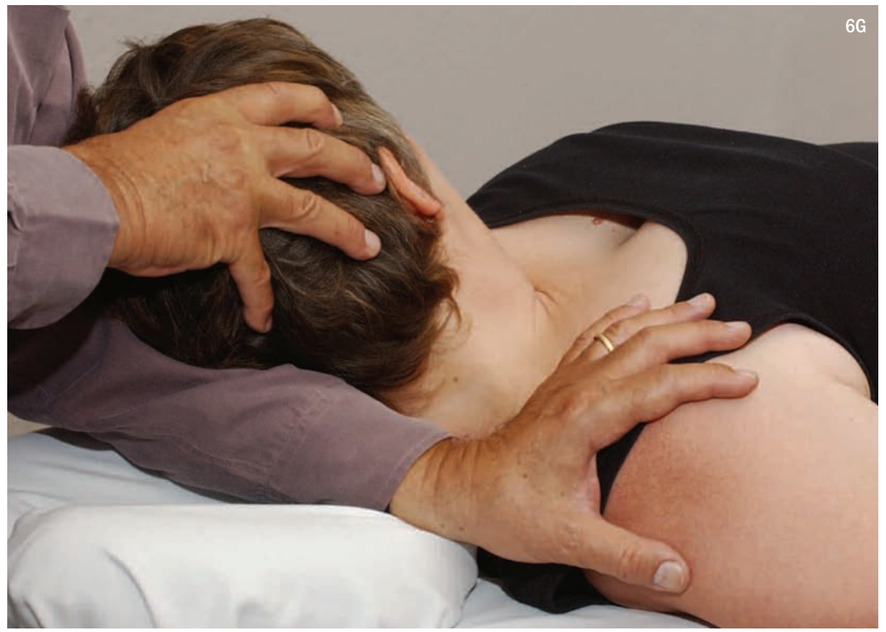


Figure 6g: whole muscle stretch In this example, the client is repositioned so that a whole muscle stretch of levator scapula can be introduced, after a light isometric contraction of the muscle. This "muscle energy" stretch is also held for no less than 30 seconds. This integrated neuromuscular technique sequence should effectively deactivate the trigger point.

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