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Postisometric Relaxation

By Warren Hammer, MS, DC, DABCO

Postisometric relaxation (PIR) is a very effective method of dealing with acute tension in soft tissue problems that may preclude immediate spinal adjustment. How often have you spent excessive time dealing with severe wry neck or patients with emotional type spasm? Often they will not tolerate an immediate adjustment. I have found that PIR is an excellent method for relaxation of tension that is often superior to modalities.

In "functional pathology of the motor system,"¹ it is reflex changes due to dysfunction (muscle spasm, spinal fixations, trigger points, etc.) that creates "tension" that stimulates nociceptives causing pain. This dysfunction is differentiated from morphological changes like a herniated disc although treatment of the accompanying functional dysfunction may help to alleviate some of the disc pain. Treating functional pathology depends on the type of dysfunction. Joint dysfunction is probably the most frequent functional pathology and often an adjustment will reduce the fixation, alleviate the accompanying muscle tension and reduce local or distant compensatory hypermobility. But the main source of nociception might be due to changes in soft tissues in the deep layers of fascia or muscles, requiring soft tissue techniques.

PIR is a technique that can be substituted for the stretch and spray technique, it can often reduce a muscular spasm that is responsible for a spinal fixation, and eliminate pain points where a tendon is attached to the periosteum. It is very effective for the acute patient who can hardly tolerate any movement at all.

Postisometric technique as developed by Mitchel et al.,² was modified by Lewit.³ Lewit feels that to reduce increased muscle tension due to disturbed function, stretch is not really necessary. He feels that stretch is only necessary if there are "irreversible contractures due to morphological connective tissue change."³ The procedure is as follows:

1. Bring the muscle to its maximum length without stretching, taking up the slack. There should be only minimal or no pain.
2. The patient is asked to resist with only minimal force (isometrically) and to breathe in for 10 seconds.
3. The patient is then told to 'let go' (relax) and exhale slowly. It is important for the doctor to wait and feel the relaxation. The doctor could wait 10 to 20 seconds or longer as long as relaxation is taking place. Due to pure relaxation there should be an increase in the range of motion.
4. If the patient has difficulty relaxing, hold the isometric phase for 30 seconds before having the patient 'let go.'
5. Usually three to five times is all that is necessary to obtain spontaneous stretch each session.
6. Along with the breathing, having the patient look up (eyes only). This helps facilitate the inspiration, which facilitates the muscle. Have the patient look down during expiration to aid in relaxation.

This technique can be used with the force of gravity substituting for isometric resistance. In an acute psoas spasm, have the patient sit at the edge of a table holding one knee to the chest and allowing the opposite thigh and leg to hang. Follow the above procedure and observe the thigh as it drops. I often give this exercise to my acute patients who state that their pain is relieved.

References

1. Lewit K: Manipulative Therapy in Rehabilitation of the Locomotor System, 2nd edition, London: Butterworth, 1991:pp 30-32.

2. Mitchell F Jr., Moran PS, Pruzzo NA: An Evaluation of Osteopathic Muscle Energy Procedures. Pruzzo, Valley Park, 1979.

3. Lewit K: Postisometric relaxation in combination with other methods of muscular facilitation and inhibition. Man Med, 1986, 2:101-104.

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Editor's note: Dr. Hammer's next Subluxation Myopathology seminar is scheduled March 12-13 in Davenport, Iowa. You may register by calling the Chiropractic Order Desk at 1-800-359-2289.

You may also order Dr. Hammer's book, Functional Soft Tissue Examination and Treatment by Manual Methods: The Extremities, at the same 1-800 number. For more information, see the Preferred Reading and Viewing List on page XX (Part #T-126).

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