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PT Classroom - Muscle Energy Technique

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Dr. Kerry D'Ambrogio, D.O.M., A.P., P.T., D.O.-M.T.P. is an internationally recognized lecturer, author, physical therapist, osteopath and board certified acupuncture physician. He is the President and Director of the D'Ambrogio Institute (DAI) and Therapeutic Systems, Inc. (TSI). He graduated from the Physical Therapy program at the University of Toronto, Canada, the Osteopathic program at the Canadian Academy of Osteopathy in Hamilton, Ontario, Canada, The John Wernham College of Classical Osteopathy in Maidstone England and the Acupuncture program at the Academy of Chinese Healing Arts in Sarasota, Florida, USA. His unique approach follows several schools of thought. His background in manual therapy includes: Maitland, Kaltenborn, Cyriax, McKenzie, Norwegian approach, and Osteopathy (Muscle Energy, Strain/Counterstrain, Myofascial Release, Craniosacral Therapy/Cranial Osteopathy, Visceral Manipulation, and Classical Osteopathy among others). Dr. D'Ambrogio also has a background in Acupuncture, Applied Kinesiology, Orthotics, Muscle Imbalance and a variety of exercise and movement therapies (Janda, Somatics, Florence Kendal, Shirley Sahrman and the Norwegian approach, among others).

Dr. D'Ambrogio started lecturing in 1988 and has taught in over 20 countries worldwide. He is recognized throughout Canada, the United States, Mexico, Brazil, Venezuela, China, Hong Kong, Japan, New Zealand, Australia, the Philippines, South Africa, England, Scotland, Wales, Ireland, Germany, Italy, Norway, and Israel as an exceptional teacher of manual and exercise therapies. He is a certified instructor recognized by the International Alliance of Healthcare Educators (IAHE). He is a published author of Positional Release Therapy and he has written numerous articles in Physical and Occupational Therapy journals. He has also discussed health issues on radio and television talk shows.

Muscle Energy Technique

Neural Muscle Energy Technique (MET) primarily reduces the tone in a hypertonic muscle, re-establishing its normal resting length. Shortened and hypertonic muscles frequently are the reason for restricted motion of a joint or a group of joints. Using isometric contractions created by the interplay between therapist and patient, MET gently re-educates the hypertonic muscle to its original range and function.

The method was developed by Dr. Fred Mitchell, Sr., D.O., a student of anatomy and a gifted osteopathic physician. Mitchell based his techniques on those of T.J. Ruddy, D.O., who developed a series of muscle contractions against resistance designed to be performed by the patient. Mitchell expanded on these principles incorporating them into a system of manual medical procedures that could be applicable to any region of the body. University of Toronto professor and physical therapist Doug Freer first introduced me to MET. At that time, I was studying physical therapy after having been exposed to countless hours of treatment for injuries I sustained playing varsity football at the University of Western Ontario. MET restored movement in my lumbosacral junction and freed me from lower back pain.

Physical and occupational therapists, massage therapists, athletic therapists, and osteopaths have been aware of the benefits of MET for many years and have integrated the technique with other modalities and exercise. It is used to help mobilize restricted joints by stretching hypertonic muscles, capsules, ligaments, and fascia. This leads to improved postural alignment and the restoration of proper joint biomechanics and functional movement. It helps speed up recovery so that the patient can begin exercises at an earlier stage of treatment. MET also facilitates neuromuscular re-education, strengthens flaccid muscles, and reduces edema and pain.

When a patient exhibits pain, some therapists are tempted to address that area of the body directly. However, therapists using MET take another approach based on joint biomechanics and their structure. We work to restore proper joint biomechanics and functional movement by addressing the underlying structural problem. This is accomplished by stretching the joint capsule, ligaments, muscles and fascia to increase ease of movement and decrease swelling and impingement. This often results in the reduction of pain.

There are certain useful guidelines with regards to treatment strategies, particularly for the lower quadrant. My preferred approach is to do a full body evaluation and treat the most restricted segment first. If several restricted areas exist, I address the region of the body that has the highest accumulation, working proximal to distal. This is a general guideline and may not apply to all cases.

Some therapists feel that the pelvis is the preferred place to begin as it forms a foundation for the sacrum and the rest of the spine. Specifically, there are three joints in the pelvis: two iliosacral, and one synthesis pubis. Upslips or downslips in the iliosacral joints and cephaled or caudad, compressed or gapped pubic dysfunctions are treated first, followed by the lumbar spine and then the sacrum. The remaining areas of the pelvis and the lower extremities are then addressed. As stated earlier, rather than directly treating the pain, we evaluate for joint stiffness and biomechanical problems that could be the underlying cause of the discomfort.

For instance, rather than assuming that the cause of the patient's low back pain is in the lumbar spine, consider the shoulder. It can affect the biomechanics of the lumbar spine and sacrum by way of the latissimusdorsi muscle and fascia. The pelvis also should be evaluated because the muscles(iliopsoas and quadratuslumborum), and ligaments (iliolumbar), attach to the pelvis as well as the lumbar spine.

For a patient with knee dysfunction, consider all the muscles that attached to the knee and originate in the pelvis and hip. There have been many low back patients who have needed treatment to the knees before change can come about in the lower back. Think of the body as a kinetic system made up of moves and joints in addition to muscles and fascia.

Therapists also have found MET useful, especially in the treatment of upper extremity problems. The technique is used to mobilize the shoulders, elbows and wrists. With this method, it becomes easier to see that the cervical spine, thoracic spine, and ribs also can be factors contributing to upper extremity problems.

Taking a broader view of the body can uncover the cause of the problem. With MET, the patient first undergoes a full body screening evaluation (A.R.T.S.). This consists of Asymmetry of posture or postural analysis, Restriction in range this consists of range of motion testing, Tension tests for joint hypomobility and evaluating the Tone of muscle and the Tenderness of muscles and finally Special tests to distinguish which tissues are involved. The results are then prioritized according to the most restricted segment and tissues involved. The therapist then passively positions the patient's body at the restricted muscle barrier on one or two planes to specifically localize the segment. Once at this restricted barrier, the patient is asked to perform an isometric contraction in a precisely controlled direction against a counterforce applied by the therapist. This lasts eight to ten seconds and the patient then is instructed to relax two to three seconds before being re-positioned further in their range. The procedure is repeated three to five times.

The patients who seems to benefit most from MET are those with a mechanical joint dysfunction. Their symptoms are relieve by rest or positioning and aggravated by certain movements or postures. Those with a clear mechanism of injury or history of trauma, also respond well. This technique is particularly effective with treating joint stiffness as well as muscle hypertonicity, muscle guarding, and fascial restriction.

MET requires very little physical effort on the therapist's part as compared to other modalities such as joint mobilization, where the practitionermust exert all of the force.
In MET, however, the therapist positions the patient who then does the work of contracting his or her muscles in a very gentle manner using only ten to twenty grams of force. There is very little strain on the therapists as long as proper body mechanics are used. Gentle enough for use with patients ranging from infants to the frail elderly. MET is equally affective for the structural complaints of athletes or auto accident victims. Sufferers of headaches or chronic shoulder, neck or back pain may find relief through MET.
Contraindications to the use of MET, are joint instability, healing fractures, malignancy, open wounds, sutures, severe rheumatoid arthritis and constant, unyielding pain that cannot be lessened by positioning or rest.

Because of the efficiency of MET and ease to perform the technique, it is quickly gaining popularity among manual therapists internationally. It is easily learned by healthcare professionals. I have developed post graduated workshops that provide instruction into the concepts, theories and applications, as well as demonstrations and hands-on practice.

If you are interested in learning more about MET seminars with the D'Ambrogio Institute visit DambrogioInstitute.com or watch this introductory video -

For more information regarding Muscle Energy Technique, how it can benefit your patients, and training seminars, please go to[Dambrogioinstitute.com](Dambrogioinstitute.com).

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