Dynamic Chiropractic

SPORTS / EXERCISE / FITNESS

Therapeutic Muscle Stretching: Background and Principles

Joseph Cimino

Before a brief discussion of Vladimir Janda's work, I would like to acknowledge my friend and colleague, Daniel Muehlemann, P.T., D.C., who, as a European-trained physical therapist, brought to Western States Chiropractic College (WSCC) his knowledge and experience.

It was at WSCC that we found that we shared a common concern for the chiropractic profession's depth of training in the area of soft tissue treatment. As a result, we developed several undergraduate and postgraduate seminars addressing different treatment techniques. WSCC has now incorporated much of this information into the core curriculum.

These techniques, when applied in conjunction with chiropractic manipulation, have the result of addressing the patient's recurring joint problem by improving the range of motion (ROM) and the concerted muscular balance of the tissues that affect the joint movement.

It was through my working with Dr. Muehlemann that my background in soft tissue treatment expanded to include exposure to various European physical medicine techniques and practitioners: Kalterborn, Evjenth, Hamberg, Lewit, and Janda.

Vladimir Janda, Czechoslovakian neurologist, is credited for the categorizing of muscles into two systems, postural and phasic. Postural muscles, those of older embryonic origin, are involved in maintaining position. On the other hand, the phasic muscles, phylogentically younger, are involved in movement.

Other differences include: enzyme content, neurologic control, and performance characteristics. It is important to note that most muscles contain fibers of both groups, but that one group of fibers may form the predominant system within that muscle.

Janda observed that postural muscles tend to be hyperactive and more apt to become spastic with upper motor neuron lesions. Conversely, phasic muscles, with a tendency for inhibition, were the same muscles that became flaccid with upper motor neuron lesions. These typical imbalances in motor patterns are enhanced by pain and fatigue. Janda terms this a condition, "microspasticity."[1]

Janda goes on to describe some common clinical presentations:

Painful hip: usually the hip flexors and adductors are hypertonic with the gluteals being weak

Shoulder pain: often the pectoralis and subscapularis are taut while the supraspinatus, infraspinatus, and deltoid muscles are weak

In chronic painful knee conditions: he has found the vasti to be weak while the rectus femoris remains tight

Often as chiropractic physicians, we are confronted with musculosketal pain that may not fully

respond to manipulation. One should then evaluate the balance of the muscles that control movement of that joint. If imbalances exist, a regime of therapeutic muscle stretching is indicated.

Reference:

1. Lewit, K. Manipulative Therapy of the Locomotor System. Boston, Butterworths, 1985.

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