

# **Evidence-Based Chiropractic:**

## **An Objective Soft Tissue Exam**

**Todd Turnbull, DC, CCSP**

**How many times have you evaluated an auto accident patient with numerous symptoms but only find a few positive orthopedic tests results? Without objective findings it is tough to show the need for care beyond a few visits. Orthopedic test procedures are meant to evaluate joint or nerve dysfunction but usually do not directly address the injury to muscle tissue. The main reason chiropractors use orthopedic tests is because that is what they were taught in school. Chiropractors need to prove soft tissue injury with test protocols that correctly evaluate the tissues that are damaged and dysfunctional, especially to insurance companies and attorneys.**

**In today's medico-legal environment the standards of care require doctors to produce documentation that is Evidence-Based. Your exam findings, treatment notes and results need objective quantification that leads to an identifiable outcome. What tests can chiropractors utilize during exams that are objective and uphold inter-examiner reliability standards?**

**There are two types of soft tissue conditions that should be addressed in your exam procedures; structural and functional. Structural damage to soft tissues includes fibrous adhesions and scar tissue of muscles and/or fascia. Evaluation of structural issues requires development of palpatory skills using digital palpation and/or instrument assisted palpation such as Intracell's massage stick. [Pic 1]**

**Functional problems with soft tissues are revealed through palpating muscle tone, evaluating range of motion, noting coordination dysfunction and testing muscle strength. Evaluating soft tissue dys-function reveals the quality of neuro-muscular interaction and gives objective information about treatment results. There are several instruments available to help collect objective data about a patient's soft tissue function such as goniometers and dynamometers.**

**Many soft tissue techniques currently being taught to chiropractors deal with finding and fixing fibrous adhesions. So how do you document your findings? How do you note treatment results if you are only focusing on addressing adhesions?**

**A major obstacle to objectively evaluating soft tissue injuries is quantifying palpatory findings. One way to chart your findings would be describing the size and location of the adhesions found through palpation. Beware! In a deposition, many**

attorneys will proceed to grill the doctor relentlessly about their palpation findings and skills, attacking the inter-examiner reliability of palpatory findings.

Muscle tone palpation can be quantified more accurately provided the practitioner incorporates a consistent procedure that another doctor could reproduce. For example, in my seminars I teach doctors to document muscle tone palpation findings by using a 1-4 grading scale where mildly hypertonic are a grade 1, moderately hypertonicity equals a grade 2, severe equals grade 3 and grade 4 indicates extreme hypertonicity. This approach to documenting muscle tone has an outcome based focus of reducing hypertonicity.

Range of motion findings are recognized as being medically significant objective findings of nerve, joint and muscular dysfunction. Using static ROM findings gives a limited amount of information about the quality of the motion as compared to incorporating dynamic motion analysis. Dynamic motion analysis tests the coordination of nerves, joints and muscles revealing locking, jerking, and loss of motion through a region or regions. Differences can be noted by testing the motion in both a clockwise and counterclockwise direction and/or forward and rearward rotation.

Manual muscle testing as described in “The AMA Guides to Evaluation of Permanent Impairment” is for evaluating neurological deficiencies and requires the doctor to develop sensitivity to muscle strength function. The ‘AMA Guides...’ utilizes a 0-5 scale to determine neuro-muscular dysfunction. A rating of ‘5’ is noted as being *full* resistance strength, while a ‘4’ is described as *some* resistance. Those definitions are extremely vague and leave room to glean more detailed diagnostic information about the neuro-muscular interaction.

Optimal muscle function is defined as the ability of a muscle to recruit and lock against a sustained force over a period of time without failure. [pic 2] When a muscle malfunctions there is a failure to recruit enough fibers to achieve maximum contraction and/or sustain resistance against a force over time. [pic 3] This failure to recruit is usually the result of abnormal neuro-muscular interaction.

Quantifying muscle testing by using eccentric break testing protocols, allows the doctor to test both power output and endurance of a specific muscle and is an efficient, objective diagnostic tool to document soft tissue injuries. Doctors incorporating these protocols refine their sensitivity to a higher degree and utilize the muscle tests with consistent accuracy which leads to better treatment results. The best part of using eccentric break testing protocols is having patients know that there is an undeniable change in the way their body function has improved as a result of the adjustment.

**It is possible to perform an objective outcome-based soft tissue exam in 15 minutes or less. The exam should include static and dynamic range of motion analysis, muscle palpation and eccentric break muscle testing.**

**Learning to perform objective test protocols for soft tissues will give the Chiropractor more tools to help them both in the office and in the courtroom. Addressing both structural and functional conditions allows the doctor to obtain better results with a larger variety of conditions. The confidence you gain from knowing when, where, and how to evaluate and correct soft tissues is priceless. Patients can tell when you are confident and when you are not. They will seek out the doctor that exudes confidence!**