Dynamic Chiropractic

SOFT TISSUE / TRIGGER POINTS

What About Muscle Testing?

Warren Hammer, MS, DC, DABCO

A patient may complain of pain in the upper trapezius area, and the practitioner might palpate areas in the muscle that are tender. But repeated muscle testing of this area may not reveal any pain or weakness. This usually means that the contractile tissue is normal. Maybe this pain is referred from a cervical or shoulder lesion that would create the pain on cervical or shoulder functional stress testing. Maybe the pain is referred from the viscera. Sometimes, when dealing with an athlete who complains of muscular pain midway through the competition (e.g., a swimmer or runner), a muscle evaluation at the time of complaint is necessary, since the athlete has superior muscle tone that does not necessarily elicit pain in the office. Pain and especially fatigue on repeated muscle testing may also be caused by intermittent claudication, due to an arterial problem.

When muscle testing, it is important to use testing positions that put synergistic muscles in their most weakened state. For example, testing medial rotation of the shoulder with the patient's arm at their side, the elbow flexed 90 degrees and extending forward in the sagittal plane, rarely determines minimal weakness of the subscapularis muscle. This is because the pectoralis major is synergistically helping in shoulder medial rotation. This is an important reason why the lift-off test is used, whereby the patient puts their arm behind their back and pushes their forearm posteriorly against resistance. In this position, the pectoralis major is not in play and more stress is put on the subscapularis, especially if the patient is able to bring their forearm further up their spine when pushing posteriorly. A caution with this test is that the patient may attempt to push their forearm out by using their triceps, holding their elbow back during the test to neutralize the triceps muscle.

One of the most important test results for a muscle is a weak and painful reaction. Weak and painful must be considered serious. From a tendon point of view, a partial rupture should be considered, but the possibility of fracture or metastases must also be considered. Any cervical-spine muscle testing that results in immediate pain and weakness must be X-rayed. Do you routinely muscle test every patient with cervical pain? Passive testing should also be used, as I have discussed in previous articles. This applies to all areas of the musculoskeletal system.

When muscle testing, we must also be aware that we may be testing the structure the muscle is attached to and not the muscle itself. Pectoralis testing may be incriminating a rib fracture or quadriceps testing may be incriminating an avulsion fracture of the anterior inferior iliac spine.

Of course, painless and weakness could be evidence of a full thickness tear of a tendon or a neurological weakness, for example, with weak toe-rising.

Sometimes, testing a shoulder may reveal weakness of three rotator cuff muscles. In this type of situation, the muscles are rarely the prime source of pain. The muscle weakness may be due to an inflamed bursa or even a bone metastasis.

Hopefully all chiropractors, even our subluxation-based DCs, test for shortened muscles, especially the muscles that are directly inserted into the spine. Take the *levator scapulae*, for example. It is attached to the transverse processes of the upper four cervical vertebrae. If this muscle and its

related fascia are chronically shortened, you can expect the related vertebrae to continually need adjustment. This type of patient is bound to be overtreated unless the soft tissue components are evaluated and treated.

Warren Hammer, MS, DC, DABCO
Norwalk, Connecticut
softissu@optonline.net
www.warrenhammer.com

AUGUST 2004