

Move Your Anatomy

By Keith Eric Grant, PhD, NCTMB

As midsummer's day approaches each year, it marks the reappearance of one of my favorite micro-communities. For one week in June, Scandinavian dancers and musicians gather in the redwood forests just inland from the Mendocino, California coast.

Teachers of regional dances and fiddle tunes are brought in from Sweden and Norway, and other teachers and participants arrive from across the United States. It is a community marked by the respect and encouragement given to each student struggling with the nuance of a dance or tune, and by the ways in which all contribute to the week. Part of what I contribute are my skills with muscle and tissue, which help keep a number of my fellow participants more comfortably dancing and fiddling. Given the motions of what we are about, my fingers may work deep into the muscles of the anterior torso, hip, and gluteals of those asking for my help.

I stress these bodily areas for their great importance to movement and posture,¹ and because, as I've discovered via a number of e-mail discussions, many massage schools apparently give only summary attention to these areas. In my mind, this is a very serious omission for those hoping to more than momentarily ameliorate the tensions and pains of their clients. It is not enough to simply move our work over painfully tight areas, because the pain and tightness can be secondary to the shortness and adhesions of another area.⁷ Consequently, it is important to understand the basic patterns by which maintained tension leads ultimately to dysfunction, and to work to relieve these patterns.

Vladimir Janda grouped muscles into postural and phasic muscles.² Postural muscles are oriented toward static support and tend to shorten when stressed; phasic muscles are oriented toward movement and tend to weaken when stressed. These two types of muscles are key in understanding two common patterns of muscle dysfunction: upper-crossed syndrome and lower-crossed syndrome.^{2,3} In upper-crossed syndrome, the pectorals, upper trapezius, and levator scapula (postural muscles) become short, while the deep neck

flexors, rhomboids, and serratus anterior (phasic muscles) become weak. In lower-crossed syndrome, the iliopsoas and erector spinae become short, while the abdominals and gluteals become weak. In both syndromes, weak muscles can be strengthened by exercise only after the shortened muscles have been released. While forward-pulled shoulders may result in weak, lengthened and taut rhomboids, habitual anterior flexion can compress the ribs and cause weak and short abdominals. Thus, relieving back pain may require releasing and lengthening the entire anterior torso, as well as releasing shortened posterior muscles.

Dance kinesiologist Sally Sevey Fitt notes the extent to which our cultural habits affect our muscles and body.⁴

"The extended amount of time we spend sitting in this culture allows the hip flexors to tighten up. Even though dancers spend a lot of time on their feet, they too are subject to tight - or short - hip flexors resulting from excessive sitting."

Bodyworker Erik Dalton similarly calls us a "society of flexion addicts."³ Fitt further discusses the symptoms resulting from tightness of the anterior torso muscles pectoralis minor and serratus anterior.⁴

"The sensory experience of pectoralis minor syndrome includes any combination of the following: severe pain and/or spasm in the area of the upper trapezius, levator scapulae, and/or the rhomboids (this sometimes progresses to the muscles of the neck, so that turning the head is extremely painful, if it is possible at all); and pain radiating down the medial (ulnar) side of the arm, sometimes all the way down to the fourth and fifth fingers. Unfortunately, the pectoralis minor is difficult to stretch: no 'backward tilt' is possible, because the scapula makes contact with the rib cage at an inferior angle. For this reason, the most direct route to relief is through deep massage of the pectoralis minor.

"Serratus anterior tightness is a condition that I discovered while working on this very book. Hours and hours at the keyboard (with the arms slightly in front of the body and the scapula slightly abducted) required a continuous low-grade contraction of the serratus anterior. The pain was somewhat similar to pectoralis minor syndrome, focused in the upper back but a little lower (perhaps middle trapezius?), and radiating around the rib cage (following the path of the serratus anterior)."

From the perspective of his concept of "anatomy trains," Tom Myers discusses the clinical implications of the superficial front line. He notes the effects of a maintained "startle reflex" pattern of shortening of the anterior line along with cervical extension.⁶

"If maintained over an extended period, this reaction and its variants can naturally affect nearly every human function negatively, though breathing in particular is restricted by shortening the front line. Easy breathing depends on the outward and upward movement of the ribs, as well as the balance between the respiratory and pelvic diaphragms. The shortened SCM pulls the head forward and requires compensatory action in both back and front that restricts rib movement. Excess tension in the belly restricts both rib movement and diaphragmatic response, while shortness in the front of the hips throws out the balance between the diaphragms and results in only the front of the respiratory diaphragm being used in breathing."

It is tempting to see these considerations as applying only to clinical massage. Yet, apart from sudden injuries, the tensions held from day to day presage the eventual pain-producing dysfunctions. When the tensions are coaxed out in a timely way, via gentle stroke and jostling, the need for remedial work can often be avoided. Working the right areas means making the mental jump from static anatomy on pages of books to the moving anatomy of the actual human body. It is a leap we must take to be effective in the long run.

"Touching hands are not like pharmaceuticals or scalpels. They are like flashlights in a darkened room. The medicine they administer is self-awareness. And for many of our painful conditions, this is the aid that is most urgently needed."

- Deane Juhan.⁵

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