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Fibromyalgia and Skeletal Malalignment

By learning to use their own sensory feedback, clients can learn to correct poor body use and malalignment

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In a December 2001 article in *ADVANCE*, the authors described fibromyalgia as a response to a combination of factors, including skeletal malalignment, habitually over-contracted muscleswhether as a direct result of skeletal imbalances, of physical trauma or of emotional stressand connective tissue adhesions.[1] These, in turn, may be related to hyperarousal of the sympathetic nervous system. Consequently, helping patients to reduce pain levels, and potentially to heal from fibromyalgia, requires a multifaceted approach.

In a second article, the authors analyze manual techniques for improving fibromyalgia symptoms, specifically CranioSacral Therapy and Myofascial Release to soften tissue adhesions.[2]

This article focuses specifically on techniques for addressing the skeletal malalignment that generally accompanies fibromyalgia.

Physical therapists, chiropractors, massage therapists and other health care practitioners routinely address problems of skeletal malalignment. The question that naturally arises is: which techniques are likely to be most effective in correcting problems related to spinal imbalance? Too often, therapists are reduced to the role of helping patients manage pain rather than overcome it, since conquering chronic pain due to malalignment requires both tremendous patient discipline and a judicious use by the therapist of the techniques most apt to promote lasting change.

Practitioners should consider including the use of two methodologies that may improve the likelihood of achieving lasting improvement in their approach to skeletal malalignment and chronic pain. The first of these is the use of myofascial therapy, as both a diagnostic tool and a treatment technique. The second is postural education that teaches patients to correct imbalances by clearly demonstrating to patients—as most postural education does not—the direct, easily experienced link between improved posture on the one hand and decreased pain and greater ease of movement on the other. The Alexander Technique offers the clearest example of this type of educational process. This article discusses each of these two approaches.

Myofascial Release

While an earlier article discussed the role of Myofascial Release in softening contracted tissues, this approach is particularly well suited for promoting skeletal realignment. According to John Barnes, founder of Myofascial Release, it is fascia rather than muscles and bones that play the central role in either maintaining structural alignment or bringing the body out of alignment.[3] Therefore it is fascia that should be treated in order to bring about lasting change in the body's alignment.

Fascia is a three-dimensional web of tough connective tissue that envelops and infuses with every bone, muscle, organ, nerve and blood vessel of the body down to the cellular level. It is through the fascia that every part of the body is connected with every other. Fascia or connective tissue provides cohesion and support to the body structures, protects and assists in cellular respiration, in elimination and in fluid and lymphatic flow.

Connective tissue, which exists at superficial, deep and cellular layers, is made up of three components: collagenous fibers, elastic fibers and ground substance. Collagenous fiber is protein collagen that wraps around virtually all tissues, is continuous throughout the body, and gives strength to the fascia. Elastic fibers are also protein in nature, and are found in areas where elasticity is required, such as the tissues of the skin, tendons and arteries. The ground substance is a viscous liquid found in all of the body's connective tissues. It forms the immediate environment of every cell in the body, lubricates collagen, elastin and muscle fibers and acts as a shock absorber.

If the fascia is subjected to injury or trauma, and the impact cannot be absorbed or dispersed by the gel of the ground substance, then this causes the gel to solidify, which in turn causes fascia to shorten. As the fascia reorganizes along the lines of tension imposed upon it, the impact of this change eventually is felt throughout the body. As a simple example, take the individual with a torsioned pelvis that reflects restrictions in the fascia enveloping the iliopsoas muscle. This individual may, as a result of the torsioned pelvis, have an uneven leg length. Each step the patient takes will then have a ripple effect throughout the body, causing the body to compensate for its imbalances through muscular spasms and additional fascial restrictions. These fascial restrictions in turn create further imbalances, leading to further restrictions.

By treating the appropriate areas of fascial restriction, the therapist may be able to successfully alleviate chronic pain, even when this pain is not at the site of the damaged tissue. To accomplish this, the myofascial practitioner identifies fascial restrictions by performing a postural evaluation of the patient's structure in standing, while supine and while moving. For example, the therapist observes the patient's stance and notices if the feet are in neutral, pronated or supinated. The therapist observes the patient walking, to determine if there is a gait deviation, observes whether one leg is longer than the other, and notes whether this is due to a structural or a functional leg length discrepancy. Similarly, the therapist takes note of the position of the arms and shoulders in relation to the torso, observing the patient from behind and from the sides. The practitioner also notes the alignment of the head in relationship to the spine.

The therapist now possesses a map of the body that indicates fascial restrictions that need to be lengthened. Therapy proceeds through manual techniques, with focus first on balancing the pelvis, so as to create a stable foundation for the spine.[2] For example, in the case of the patient with a torsioned pelvis, therapy might begin by treating the psoas muscle on the anteriorly torsioned side.

The patient in this case is supine, while the therapist stands on the side to be treated. The therapist begins by applying gentle pressure with the fingertips slowly and deeply into the abdomen, one inch lateral to the umbilicus, on the side of the pelvis that is anteriorly rotated. If the patient flexes his hip as in a straight leg raise, the therapist will feel the psoas rise up against his fingers. To release restrictions in the psoas, the therapist strokes the psoas with a transverse stroke throughout the length of the muscle.[3]

This particular release might be followed by using one hand to stabilize the anterior superior iliac spine on the side of the pelvis that is anteriorly rotated, and directing a cephalad glide. The other hand engages a caudad glide on the quadriceps of the leg on the same side.[3] Treatment would continue in this manner for several minutes or until a release of the fascial tissues occured, with the therapist choosing where to release fascial restrictions on the basis of the postural evaluation performed earlier. The result of this therapeutic process: an overall softening of body tissues and a more long-lasting reorganization of the connective tissue, muscles and bones than might be affected by muscle strengthening or spinal manipulation alone.

The Alexander Technique

Successful treatment of chronic pain requires that manual therapies such as Myofascial Release be conjoined with educational techniques that teach patients how to use their bodies more efficiently. Chronic pain, including the pain of fibromyalgia, may be a result of physical trauma, and of the domino effect that trauma engenders. In many cases, however, the advent of chronic pain is simply a long-term result of what in the Alexander Technique is called "poor use," which in turn results in poor posture.[4]

Inefficient body use can have simple physical causes, such as years of leaning sideways over a desk in school, or sitting and lying on .furniture that encourages spinal collapse because it is too soft. A girl may unwittingly foster a swayback by walking with artificially protruding buttocks and chest, in an attempt to look physically appealing. Poor body use can even have emotional roots. Insecurity and anxiety reflect themselves in raised shoulders, a tightened jaw, pelvic contractions, and so on.

Whatever the cause, the resulting malalignment goes along with increasing tension imposed on the muscles, a tension that eventually leads to pain. Generally, this chronic tension goes unrecognized by the patient until a point of crisis, simply because the tension is habitual. It is the nature of habits that we often do not recognize them as habits. They just represent the way things are. In the case of a habit of physical tension, a change in that habit can occur when a patient is guided through an experience of muscular release. This is precisely what the Alexander Technique accomplishes. The long-term result: as the patient

learns how to release chronic tensions in a daily way, the body gradually and spontaneously moves toward improved alignment.

The Alexander Technique rests on the principle that efficient movement and aligned posture feel better subjectively. An aligned, freely moving body feels less tight, more elongated, lighter and more fluid. Alexander Technique teachers teach improved spinal alignment and more efficient movement by helping clients to experience and then to recreate for themselves feelings of greater ease, elongation and fluidity that are the experiential corollaries of improved alignment.

In an Alexander Technique lesson, the teacher asks the client to observe how she uses her body while the client goes through simple movements such as standing, walking and sitting. Simultaneously, through the use of skilled touch and verbal suggestion, the teacher helps the client to perform movement in a way that feels easier and is better aligned. Over time, the client learns to use this process of enhanced sensory awareness and sensory feedback to find improved posture, decreased pain and a sense of greater flow.

As an example, one can look at the simplest of movements: getting in and out of a chair. Each Alexander Technique teacher has his own style, and the following sample lesson represents an application of Alexander Technique principles, and not a set format.

1. Self-Observation. To start, the teacher might ask the client to get up from a chair several times. While doing this, the client is to observe herself and to notice what happens to her breathing. The teacher also asks the client to notice what muscles contract in the process of getting out of the chair. Paying attention to these details of habitual movement is for most people quite a challenge. Once clients get the idea, however, the majority report with some surprise that they hold their breath while rising out of a chair. Most also comment that they feel muscles contracting in several of the following areas: legs, abdomen, shoulders, neck and sometimes jaw. And of course, many clients report varying degrees of pain as they get up.

What does all this mean? Let's look at breathing patterns first. When someone holds his breath while going into movement, the diaphragm is maintained rigidly in place, and this creates a tendency for all the muscles of the pelvic diaphragm to contract. This in turn imposes stress on the spine and creates a resistance or "drag" effect on any movement. In other words, the person unconsciously makes it harder rather than easier to move. This tendency may be particularly marked in the person who is already in chronic pain and who therefore approaches any movement with trepidation, causing not only emotional tension but also physical tension, including restricted breathing.

What about the physical tensions that clients may report when they pay attention to their bodies as they rise out of a chair, tensions that may be in their abdomen, shoulders, neck and/or jaw? These tensions reflect inefficiencies of bodily movement. The muscles of the torso, neck and head are not meant to go to work in rising from a sitting position. On the contrary, efficient movement from sitting to standing is carried almost exclusively by the muscles of the legs and by the feet. These act in something of a piston and lever effect to push the body from below to an upright position.

To go easily from sitting to standing easily requires that the torso move freely over the hinges created by the hip joints, to the point where the weight of the torso is fully over the feet. Then the muscles of the legs push down through the floor to leverage the body to an upright position. Tension in the abdomen, shoulders, neck and even jaw mean that clients a) are not letting the torso fold forward sufficiently in rising, b) are not effectively using the hinges provided by their hip joints, and c) are trying to lift themselves upward from the torso rather than letting their torso tilt forward sufficiently so that their legs can propel them to an upright stance.

Even when people look like they are bending forward properly at the hip joints and moving "correctly" from sitting to standing, they may still carry excess tension and stress in their abdomen, low back, shoulders and neck. This is why attempts to get a patient to sit, stand and move properly while relying only on the mechanics of movement—and ignoring the subjective experience of movement that is the cornerstone of the Alexander Technique—are at best of limited utility. Just as we can look happy when we are in fact unhappy, we can also look like we are moving correctly, when we are in fact moving with tremendous excess effort. It is not how we look but how we feel that provides the ultimate guide in successful Alexander Technique training. And it is by learning to use their own sensory feedbackto notice when there is more or less tension in the torso and extremities—that clients learn to correct poor bodily use and malalignment.

2. Finding Easier Movement. As just described, the Alexander Technique teacher first helps clients become more aware of how they move, noticing in particular how much effort is involved in movement. Second, the teacher then helps clients achieve a freer and easier experience of going from sitting to standing. This might be done in the following way.

a) The client is instructed to go from sitting to standing a few times, while taking a deep soft inhalation at the moment of rising from the chair. Upon following this simple suggestion, most people report a dramatic improvement in ease of movement. The reason is that by inhaling, they inhibit the tendency to go into the "effort" of unconsciously contracting muscles in the pelvic region.

b) Using her hands to guide the client through the movement, and to help the client to inhibit tendencies to tighten up in the torso, the teacher shows the client how, while sitting, to move freely forward and back on the "hinge" provided by the hip joints. At the same time, the client is assisted—by touch and verbal suggestion—in keeping her spine straight, aligned and relatively free of tension.

c) When the client has grasped the principles of easy, continuous breathing and of bending forward from the hips while maintaining a long spine, that client is invited to integrate these into the next step. Sitting forward on the chair so that her feet are well beneath her, she leans forward until her weight is completely over her feet. Then, with a good inhalation, she presses down on her feet, using them like pistons and allowing her torso to remain long, as she raises herself to standing. In other words, she discovers how to use her legs in getting up, while keeping her torso released. While she does this, of course, the Alexander technique teacher monitors with her hands any tendency of the body to go into habitual tension patterns, and helps the client to both notice and let go of these.

At the end of a lesson, clients possess both tools for practice and motivation to use those tools for achieving improved alignment. They have begun to use sensory feedback, relying on finding their way to feelings of increased ease as a primary guide to whether they are moving more or less efficiently. Over time, and with further instruction, this sensory guidance mechanism promotes increased bodily poise, balance and skeletal realignment.

Conclusion

Manual therapies such as myofascial release are invaluable in promoting positive change in the body. Movement therapies such as the Alexander Technique are essential for maintaining and integrating that change. It is the patient who has habits that create pain, the patient who lives with his body, and the patient who must change habits of movement in order to absorb the support given by manual therapies. The Alexander Technique provides both motivation and useful tools for achieving this goal. In addition, because the Alexander Technique contributes to a feeling of bodily ease and the self-confidence that results from this, it helps patients overcome feelings of anxiety and stress that may play a key role in the cycle of bodily maladaptation that results in fibromyalgia.

References

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