the effects of postural distortion

Clients come into our office for many reasons. More and more of them are presenting with a physical problem that they would like addressed and/or resolved.

While massage therapy has effects throughout the entire body, most physical complaints of clients that you encounter are musculoskeletal in nature. Of all musculoskeletal regions, the most commonly afflicted regions are back and neck problems that are related to the spine.

When addressing any symptomatic region of the body, posture should be evaluated. Even though posture is not always the cause of pain or other symptoms, postural deviations do place physical stressors upon the body that predispose people to pain. To better understand the nature and cause of spine related problems, it is important to know and evaluate the spinal postures of our clients.

When evaluating a client's posture, it is important to recognize that a postural distortion can be one of two things: 1) primary, meaning that it originates in that region of the body, or 2) secondary, meaning it is caused by another postural distortion that exists elsewhere in the body. Postural distortions of the spine may be primary; however they are often sec-

ondary to pelvic postural distortions because the spine sits on the sacrum of the pelvis. Consequently, any postural distortion of the pelvis will immediately translate into a compensatory postural distortion of the spine. Therefore, when a client presents with a postural distortion of the spine, it is essential that we evaluate the posture of the pelvis.

Many factors can affect and create pelvic postural distortions, such as a dropped arch (over-pronation), wearing high-heeled shoes, structural difference in the length of the femurs and/or tibias, and idiopathic scoliosis. However, this article will focus on just one of those factors—asymmetric pull of pelvic musculature, i.e., an imbalance of pull of the muscle groups that act on the pelvis.

The posture of the pelvis can be evaluated in each of the three cardinal planes: sagittal, frontal and transverse. Within the sagittal plane, the pelvis can tilt anteriorly and posteriorly. The sagittal plane resting posture of the pelvis is a position of balance between these two tilt options. A [illegible]

orly tilted pelvis (Figure 1b), while a sacral base angle that measures markedly less than 30 degrees creates a posteriorly tilted pelvis (Figure 1c).

When the pelvis moves, it is possible for the spine to stay fixed to the pelvis and move along with it. If the head is to stay level, however, then a change in pelvic posture requires the spine to posturally compensate, resulting in a compensatory postural distortion of the spine.

These postural deviations of the lumbar spine seen in Figures 1b and 1c cause a decrease in proper biomechanical functioning of the spine and place increased physical stress upon the body. Specifically, a hypolordotic lumbar spine is less able to absorb shock when walking and running, resulting in greater compressive shock waves transmitting into the upper back, neck and head. A hyperlordotic lumbar spine directly results in greater physical stress upon the facet joints and posterior discs of the lumbar spine, predisposing the client to facet syndrome, degenerative osteoarthritis, [illegible]

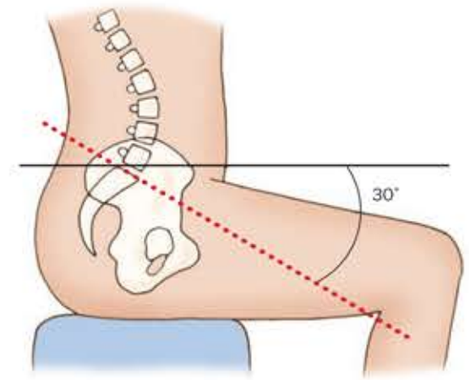

Figure 1a. A healthy sacral base angle of 30 degrees creates a healthy lordosis of the lumbar spine.

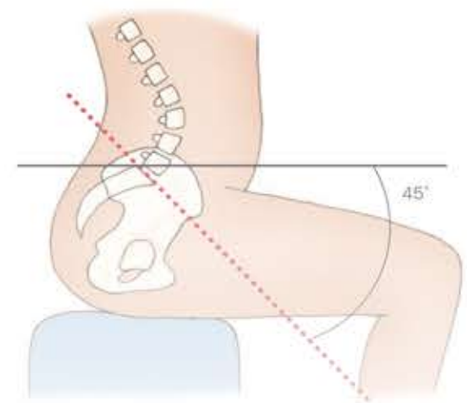

Figure 1b. An increased sacral base angle of 45 degrees creates a hyperlordotic lumbar spine.

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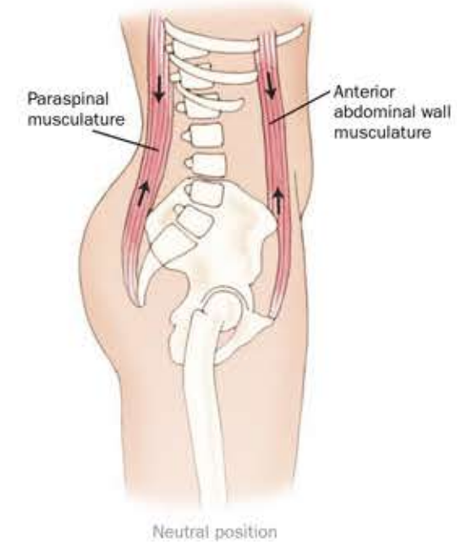

Figure 2a. This illustration shows the musculature that moves the pelvis relative to the trunk at the lumbosacral joint.