

Fascia Can Restrict Intersegmental Motion

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What do I treat first, the spinal restriction or the fascial restriction? This is a question that often comes up with practitioners who evaluate and treat the fascial system. While adjusting the spine first may have a minimal effect on freeing some of the adjacent fascia, to really determine what should be adjusted, you should first free the surrounding abnormal soft tissue loads.

An excellent new text by Richardson, et al.,¹ states that when the "tensile stress in the thoracolumbar fascia is increased, the amount of rotation and translation is limited." The transverses abdominis originates partly from the deep layer of the thoracolumbar fascia.

The middle portion of the thoracolumbar fascia (TLF) attaches to the transverse process, while the posterior portion of the TLF attaches to the spinous processes of the lumbar vertebrae. Increasing lateral tension of the TLF by contraction of the transverses abdominis may limit translation and rotation of the vertebrae. This is a particular reason why this muscle must be strengthened for lumbar stabilization.

"When the joint movement occurs, the thoracolumbar fascia and transverses abdominis complex must increase in length to allow movement. Thus, when the thoracolumbar fascia is slack, a certain degree of motion is allowed in all directions."¹ It follows that if the fascia is restricted, vertebral movement, especially translation and rotation in the lumbar spine, will be limited as in almost all areas of the body.

Fascial and muscular restriction and its effect on spinal and extremity motion are well known.

Motion palpation has recently been lambasted,² often on the evidence of lack of interexaminer reliability. Since the spine is overloaded by surrounding or even distant tensions created by soft tissue restrictions, it appears that removal of these restrictions would be necessary to determine which particular vertebra is joint restricted. Just palpating and moving a spinal segment for examination purposes must affect the soft tissue load.

Imagine five practitioners palpating the same spine with the same expertise and palpation method (which is difficult enough to achieve). Each individual palpation would change the load on the spine, thereby altering the palpation for the next practitioner. I have treated the paraspinal soft tissues many times, before and after a spinal adjustment. There is no doubt that affecting the soft tissue load on the vertebrae will alter palpation interpretation.

References

1. Richardson C, Jull G, Hodges P, Hides J. *Therapeutic Exercise for Spinal Segmental Stabilization in Low Back Pain*. New York: Churchill Livingstone, 1999.
2. Troyanovich SL, Harrison DD, Harrison DE. Motion palpation: it's time to accept the evidence. *J Manipulative Physiol Ther* 1998;21:568-71.

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