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PHYSICAL THERAPY

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231.421.9300 (East)
231.944.6541 (West)

Why It Probably Is Not the Lumbar Spine That Needs Attention

Dr. Andrew Gorecki, Physical Therapist

A long-time mentor of Superior Physical Therapy, Gary Gray, has described the lumbar spine as the "crossroads" of the body. Movement and forces from the arms and thoracic spine move down through the lumbar spine to the pelvis and legs. Movement and forces from the legs and pelvis are transmitted up to the thoracic spine and arms.

Because the lumbar spine is the movement "transportation" center, it can develop symptoms if the movement flow in the body, known as the kinematic chain, is restricted.

The frequency of symptoms in the lumbar spine resulting from movement has led to the development of lumbar stabilization programs to prevent motion of the lumbar vertebra. These programs, while well-intentioned, are ill-conceived. Instead of limiting motion, we at Superior Physical Therapy assert that the lumbar vertebrae must move in all three planes. The goal is to promote bone motion while normalizing (not eliminating) the relative motion between adjacent vertebrae.

It is not the motion of the bones that causes pain.

Rather, it is excessive motion at the joints and the disc in between that can lead to symptoms. This excessive motion is caused by limited motion in the joints **above and below** the lumbar spine.

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Therefore, the strategies at Superior Physical Therapy used to assess and treat clients with lumbar pain must look above and below for the probable suspects. Using arms and legs as the drivers of global movements identify restrictions in the thoracic spine and/or hips that are causing abnormal motion and tissue stress in the lumbar spine.

This article will focus on the lumbar facet joints. Knowledge of which joint motions will open (separate) or close (compress) is critical to understanding why certain activities may create excessive compression, and produce symptoms in our clients.

Using the right side facet joints in this example, spinal mechanics tells us that compression increases with:

- Extension in the sagittal plane
- Lateral flexion to the right in the frontal plane
- Rotation to the left in the transverse plane

In looking for causes below the lumbar spine creating "bottom-up" stress, we would suspect:

- Excessive or restricted motion at the ankle and subtalar joints
- Leg length inequality
- Restriction of any of the 6 hip motions in either hip

Similarly, causes of "top-down" stress into the lumbar spine would include:

- Limitations of gleno-humeral or scapulo-thoracic motion
- Loss of cervical motion that will inhibit thoracic motion
- Restriction of thoracic motion in any of the 3 planes, and combined multi-plane motions

With so many potential causes of lumbar facet symptoms, movement specialists need an analysis and treatment/training system that quickly and accurately identifies the "bottlenecks" in the movement system, if the treatment of low back pain is to progress beyond temporary symptomatic relief. Superior Physical Therapy and their trained therapists are specialists in exactly this thought process.

Only by targeting the CAUSES of excessive lumbar movement and stress can our advice to clients change from "don't move" to "move and enjoy" the physical and behavioral benefits of that movement.