Anatomy:
The spine is composed of 33 vertebrae—7 cervical (neck), 12 thoracic (mid-back), and 5 lumbar (low back), 5 fused to form the sacrum, and 4 fused to form the coccyx (tailbone). These vertebrae are shaped to accommodate the movements and the forces imposed on the spine daily, separated by fluid filled discs, and supported by ligaments that span the length of the spine. Hypomobility is diagnosed when the ligaments are less pliable than necessary, or the fluid is decreased in the discs between the vertebrae which create decreased movement of the spine.

Causes/Mechanism of Injury:
Hypomobility is decreased movement of the spine compared to what is expected. Differences in how the segments are moving may occur at one joint, one segment, in just one direction of movement, or as a more generalized phenomenon throughout the body. More commonly, hypomobility occurs due to the aging process, secondary to pre-existing conditions (i.e. scoliosis), inactivity, or may be acquired congenitally.

Symptoms:
Hypomobility
- Feeling of stiffness surrounding segment(s) that is decreased in movement
- Pain with moving in a direction where the segment is “stuck”
- Weakness/numbness/tingling is due to degeneration of disc or nerve involvement

Treatment/Management:
Hypomobility of the spine can be treated conservatively with skilled physical therapy. Physical therapy treatment consists of the following:
- Modalities such as electrical stimulation, moist heat/cold pack, ultrasound, vibratory massage, and whirlpool to decrease muscle tone, decrease pain, and prevent inflammation
- Soft tissue massage and myofascial release to decrease muscle tone
- Manual therapy to mobilize segments and stretching of the affected muscles, hips, and thoracic spine
- Therapeutic exercise to coordinate muscle firing pattern, increase low extremity and trunk flexibility
- Manual and mechanical traction to increase disc nutrition and overall spinal mobility

Exercises:
Exercises for lumbar hypomobility will focus on postural reeducation and trunk and lower extremity flexibility. Pictures and parameters of correct exercises are pictured on the next page.