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. Ligaments are thick and fibrous bands of tissue that connect bone to bone to form a joint. The purpose of ligaments is to limit the movement of the joint and promote stability. Hypermobility is a reflection of ligamentous laxity and muscle weakness and is diagnosed when the ligaments are looser than necessary and creates instability of the spine and greater movements of the spine in every direction.

Causes/Mechanism of Injury:
Hypermobility is increased movement 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. Hypermobility can be congenital or can occur due to trauma experienced by the ligamentous structures resulting in increased movement patterns of the spine.

Symptoms:
Hypermobility
- Myofascial trigger points surrounding hypermobile segment
- Weakness of inhibited muscles
- Excessive joint movement
- Difficulty staying in one position
- Feeling of instability

Treatment/Management:
Hypermobility of the spine can be treated conservatively with skilled physical therapy and will consist of the following activities:
- Modalities such as electrical stimulation, moist heat/cold pack, and/or ultrasound to decrease muscle tone, decrease pain, and prevent inflammation
- Manual therapy to mobilize segments that are not moving well
- Therapeutic exercise to stabilize hypermobile segments, increase spinal muscle endurance, improve balance, and coordinate muscle firing patterns
  - Importance is placed on stabilization of trunk and hip muscles
  - Never use aggressive stretching as part of treatment