



Volleyball

Volleyball is a sport that is played widely amongst females and males in the US and around the world. With its increase in popularity, overuse and acute volleyball injuries have become more common. As with other sports, we are seeing more overuse injuries due to an increase in playing time during the year and faulty mechanics/technique. In this section, I will highlight some of the more common volleyball injuries that happen acutely and from overuse. I will also highlight physical therapy considerations for each. At New Height Performance Physical therapy we not only treat the injury, but we address whole body mechanics and how it all effects injury and performance.

Shoulder:



A large part of the sport of volleyball includes repetitive overhead shoulder movements required for serving, hitting and setting. The shoulder complex is a multi-joint area that

requires strength and stability from the rotator cuff muscles, scapula-thoracic stabilizers and core muscles. Injuries seen from overuse can include rotator cuff tendonitis, bursitis, ligaments strains and labral tears.

To address volleyball injuries it is important to look at the whole mechanical chain of hitting and serving. While hitting, the dominate arm fully extends and rotates to extreme motions. Then with a high velocity the arms swings forward to contact the ball and hit it with momentum. When any part of the chain breaks down undue stress or excessive movement can irritate soft tissue. Core muscle strength and proper positioning of the ribcage allow for the hitter or server to start in a good position. In PT we address finding the deep core muscles and stabilizing the scapula and shoulder. From there, we address any issues with rotator cuff strength and the timing of the muscle patterns. It is important to address all of these in order to prevent eventual breakdown or tears in shoulder tissue.

Back:



Along with the shoulders, there is a significant amount of repetitive bending, rotating and extending (arching) the low back in volleyball. In particular there is concern with the back extension or hyperextension in adolescent girl's that can occur while hitting and setting. Injuries can include muscle strain or tightness, but can also include more serious injuries to the spine such as lumbar stress fractures, spondylolysis.

Important physical therapy considerations for back injuries include addressing weak core muscles, back extensor muscle overuse and rib cage position. Physical therapy will target muscle tightness with exercises and manual techniques. We instruct in exercises to focus on core muscle strength and proper muscle timing. It is also imperative to address technique and how to avoid back hyperextension while playing.

Knees:



Knee injuries in volleyball are commonly seen from both overuse and acute injury. Acute injuries can occur from quick pivoting/rotating movements as well as jumping and landing on uneven surfaces. Acute injuries can result in muscle, tendon or ligament injury. One of the most serious injuries can include ligament or meniscus tears. Physical therapy can help in the recovery from these injuries and can also play an instrumental part of injury prevention. Physical therapy plays an important role in determining when an athlete is safe to return to sport in order to prevent re-injury.

The most common knee overuse injury occurs at the front of the knee cap or patella-femoral region. Overuse often occurs from repetitive jumping that happens while hitting and blocking at the net. Research has shown that most often repetitive use knee injuries are the result of weakness in hip and core muscles that result in poor mechanics at the knee. Physical therapy focuses on correcting faulty mechanics and strengthening the weak muscles. Teams may choose to have a physical therapist instruct them in exercises to strengthen their hip, leg and core muscles in order to reduce the risk of injuring their knees.

Ankle:

The most common injury in volleyball is an ankle sprain. They usually occur from jumping and landing on an uneven surface or rolling it during a cutting movement. Physical therapy for ankle injuries initially involves decreasing pain and swelling. Exercises focus on restoring range of motion and strength then progressing towards balancing and dynamic exercises. Like many injuries, physical therapy can also focus on prevention of ankle injuries. We focus on identifying weakness and instructing in exercises and functional activities to avoid sprains. As with other lower extremity injuries, we often focus on core muscle strength especially increasing glute activation.