Postural Assessment for Soccer Athletes

Paul Rushing, ATC, Head Athletic Trainer. Philadelphia Union (MLS)

Soccer Injury Prevention Strategies

We welcome a new regular contributor the Professional Soccer Athletic Trainers Society (PSATS) to Performance Conditioning Soccer. Each submission will provide coaches, parents and athletes with the latest strategies in prevention injury and maintaining a healthy soccer lifestyle.

The mission of the Professional Soccer Athletic Trainers Society (PSATS) is to serve as an educational resource for the Major League Soccer athletic trainers. PSATS serves its members by providing for the continuing education of the athletic trainer as it relates to the profession thereby improving the athletic trainers understanding of sports medicine as it relates to soccer. PSATS strives to improve the education of its members so that they may better serve Major League Soccer, their organizations, and the professional soccer players under their care. PSATS also serves as an educational resource for those outside of the professional soccer community to better educate them on the role of the athletic trainer within the sports medicine team. Thank you PSATS!-ed

Paul has been the Philadelphia Union Head ATC for the last 2 years. Prior to the Union he was Head ATC for US Soccer U17 Residency Program in Bradenton, FL from 2005 to 2010. He was ATC assigned to IMG Soccer Academies from ’01 to 05.

Structural alignment (posture) affects the production of movement of everybody. Any deficits in an athlete or imbalances from optimal posture and alignment can and will create functional deficiency that can lead to injury. An accurate evaluation of an athlete’s posture both in motion is a great tool that can help predict if an athlete will be at higher risk for injury to certain muscle groups or specific joints. “Prehab” is a term used by Athletic Trainers and Physical Therapists to describe exercises, stretches, and fitness to help prevent injuries before they happen, based on what they see with postural and kinetic chain assessments such as an overhead squat. The three most common postural dysfunction patterns are categorized as lower crossed syndrome, upper crossed syndrome, and pronation distortion syndrome.

A person with lower crossed syndrome presents with increased lumbar lordosis and anterior pelvic tilt. This is the result of having weak lower abdominals, multifidus, deep erector spinae, glute maximus, and biceps femoris. Muscles that are tight include psoas, rectus femoris, and the adductors. Common injuries associated with lower crossed syndrome include hamstring strains, anterior knee pain, and low back pain.

Athletes with upper crossed syndrome present with anteriorly rounded shoulders and a forward head posture. Weak muscles include the rhomboids, lower traps, serratus anterior, teres minor, infraspinatus, and posterior deltoid. The tight muscle groups associated with this include pec major and minor, levator scapula, upper traps, latissimus dorsi, subscapularis, sternocleidomastoid and scalene. Common injuries associated with this include rotator cuff impingement, shoulder instability, biceps tendonitis, thoracic outlet syndrome and headaches.

Pronation distortion syndrome (flat feet) is characterized by excessive foot pronation, knee
flexion, internal rotation, and valgus of the knee. Weak muscles include posterior tibialis, anterior tibialis, vmo, biceps femoris, and glute medius. Tight muscles include the peroneals, adductors, medial hamstrings, TFL/IT Band, and psoas. People with this syndrome can develop plantar fasciitis, shin splints, anterior knee pain, and low back pain.

Postural imbalances can also lead to leg length inequality or vice versa. If a person has a leg length discrepancy, it can upset the normal postural balance by causing the body’s center of gravity to shift. This leads the body to compensate by shifting the pelvis to the longer side, pelvic tilt to shorter side, and increased knee flexion on long side.

It is important to differentiate whether or not the leg length discrepancy is due to muscle imbalances or is actually a true discrepancy. If it is determined that it is a true leg length problem, a heel lift in shorter side can help. If it is due to imbalances, these problems can be corrected with myofascial releases and strengthening. If not addressed properly, leg length issues can lead to numerous problems including knee and hip arthritis.

The important thing to remember when assessing postural imbalances and leg length discrepancies is to determine the reason for the inequality as well as the amount of inequality. By determining the causes of the postural and leg length issues, it is possible to correct an athlete’s issues before they lead to an injury.

Contact Paul at PRushing@philadelphiaunion.com

Net Links: Click HERE for the PSATS Present: Postural Restoration and Injury Prevention/Rehabilitation of Soccer Players by Kentaro “Kenny” Ishii