Optimal Health University™

Presented by Dr. Michael Corey

Avoiding Injury on the Soccer Field

Soccer is the most-played sport around the world. And, while it is safer than many sports, injuries do occur. Dr. Corey proposes using several tactics to prevent both children and adults from incurring soccer-related injuries.

Soccer: The Most Popular Sport in the World

Soccer is surprisingly ancient — the first known match was played in 611 A.D. In the United Kingdom, where this wildly popular pastime is called "football," the game was banned for centuries due to "broken skins, broken heads, torn coats and lost hats." But the sport was so loved that, to stem the chaos, official rules were established in 1815.

While soccer injuries are fairly frequent, even for the pros, Dr. Corey says that it's possible to play safely while still "bending it like Beckham."

Ankle Injuries

Ankle injuries in soccer are primarily caused by either jumping in proximity to other players, or by changing directions quickly (*J Athl Train* 2007;42:381-7). These actions promote ankle instability upon landing, and are set-ups for twisting, rolling or compressing the joint.

Protecting the ankle starts with recognition of the specific movements that expose the joint to possible harm. Sports medicine experts recommend *proprioceptive training* to cut down on ankle sprains and strains, especially for players with known vulnerabilities (*Am J Sports Med* 2007;35:922-6).

Proprioceptive instruction provides internal feedback about how the ankle moves in relation to the rest of the leg. It's a sort of deconstruction of the body's "locomotion" and can teach players how to "play smarter" with respect to the ankle joint.

Another useful technique to bolster ankle steadiness is taping and/or bracing the area before practices and competitions (*J Athl Train* 2004;39:85).

Sports medicine research has noted that too much posture "sway" heightens the risk for ankle injuries (*Clin J Sports Med* 2000;10:239-44). Chiropractic care provided by Dr. Corey helps establish and maintain optimal posture, which diminishes sway and corresponds directly to better balance.

If ankle injury does occur, research shows that chiropractic therapy is an efficient and effective choice (*Australas Chiropr Osteopathy* 2002;10:21-30).

Knee Injuries

Many different sports may overburden the knee joint, and soccer is no exception. The knee often bears the brunt of impact. This opens up the area to serious injury, either from overextension or twisting. Soccer's ubiquitous stop-jump tasks boost the risk of straining or tearing the knee's ligaments, particularly the anterior cruciate ligament (ACL) (*Am J Sports Med* 2007;35:235-41).

Sports scientists generally agree that during jumping, motion patterns in the lower leg are pre-programmed prior to landing. These patterns can reduce knee flexion (the opposite of extension) and direct extra loading, or pressure, to the ACL (*Am J Sports Med* 2007;35:235-41).

In one study of an NCAA Division One women's soccer team, athletes who did special neuromuscular warm-up exercises before the game were much less likely to overstress the ACL during play (*Am J Sports Med* 2008;36:1476-83). This was particularly true for players with previous ACL problems.

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Another research project with elite soccer players confirms that neuromuscular training can reduce ACL injury caused by soccer's infamous side-cutting maneuvers, which involve changing directions rapidly (*Clin J Sport Med* 2008;18:329-37). Chiropractic care offers many options for this type of neuromuscular training.

Research draws a strong association between decreased range of motion in the hip and ACL rupture (*Arthroscopy* 2008;24:1034-7). Chiropractic care can successfully expand hip range-of-motion, which helps guard the player's knee without restricting play.

If the knee does become strained, chiropractic adjustment of the knee and hip (sacroiliac joint) will lessen leg muscle inhibition, and encourage healing and recovery (*J Manipulative Physiol Ther* 2000;23:76-80). Chiropractors also teach guided exercises, which will reduce pain and enhance muscle balance after injury (*Clin J Sport Med* 2000;10:22-8).

Head and Neck Injury

"Heading," or using the head to move the ball, is dangerous for the neck (cervical) area. Multiple impacts may produce bony changes in the cervical spine and predispose a player to related degenerative disease later in life (*Pain Physician* 2005;8:391-7). It may also cause concussions.

"People have this misconception that soccer has no risk," says Scott Bautch, DC, past president of the American Chiropractic Association's Council on Occupational Health. "I think soccer is too aggressive too early, which is leading to potential problems. It's not as though we can fix brain damage later on in these kids' lives."

That's why many doctors of chiropractic recommend that children's soccer organizations not allow heading. And, when youths are old enough to learn heading (in their mid-teens), it's essential to emphasize safe heading training techniques.

Thankfully, studies do not correlate intentional heading with reduced cognition (*Res Q Exerc Sport* 2008;79:235-44). And the sheer number of headers performed over the course of a career does not appear to affect neuro-psychological abilities (*J Clin Exp Neuropsychol* 2007;22:1-10).

Chiropractic care incorporates knowledge of the numerous position changes the cervical joints undergo as they support the head (*Spine* 2007;32:E692-701). And studies show that proactive chiropractic adjustment is safe for the cervical spine (*Spine* 2007;32:2375-8).

Hamstring Injuries

Most people have a distinct preference for one leg over the other when it comes to kicking. Research confirms that this predilection carries over into soccer (*Dev Psychobiol 2008* Epub). But leg-choice habits may only become a problem when fatigue sets in.

As a player tires, strength in both the quadriceps (frontal thigh) muscle and hamstring tendon is lost. This can create an imbalance, which alters stability. The risk for injury continues to rise as the player becomes even more exhausted (*Int J Sports Med* 2007;28:952-7).

Some tests at the University of Nevada showed that six weeks of hamstring strength-training wards off injuries, both to the hamstring and the knee (*J Strength Con Res* 2007;21:41-7). Warm-up stretches and flexibility exercises are also beneficial (*Scand J Med Sci Sports* 2008;18:40-8).

Another established method for avoiding hamstring injury is isokinetic endurance training (*J Strength Cond Res* 2008;22:1458-67).

To avoid hamstring injury, a preseason visit to the chiropractor will help ensure proper lumbar-pelvic mechanics (*Chiropr Osteopat* 2005;13:4). Individual chiropractic techniques performed regularly will continue to expand hamstring flexibility (*J Manipulative Physiol Ther* 2006;29:224).

Chiropractic care may also restore leg-strength balance. This restoration cuts the prevalence of muscle and hamstring injury (*Am J Sports Med* 2008;36:1469-75).

Additional Safety Tips

Soccer athletes need not sacrifice their competitive edge as they strive for safe play. Engaging in a few low-intensity activities during halftime can keep muscles warm, so a player can maintain speed without risking injury during the second half (*Scan J Med Sci Sports* 2004;14:156-62).

Proper hydration is another key to dodging injuries and sustaining performance intensity (*J Strength Cond Res* 2008;22:1394-401). And consider this: One Spanish study advises taking antioxidant supplements, including coenzyme Q 10, to fend off oxidative damage in the blood, which can result from high-level play (*Eur J Appl Physiol* 2008 Epub).

Ask us for more information about how chiropractic can be combined with training and exercise regimens to help athletes stay injury-free on the soccer field this season. You'll be glad you did.

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