Optimal Health University™

Presented by Dr. Michiel Rorick

Preventing Tennis-Related Sports Injury

Tennis is phenomenal exercise. However, tennis can also spawn a variety of injuries. Areas particularly prone to injury include the back, neck, elbows, wrists, shoulders, knees and ankles (Am J Sports Med 1991;19:523).

Chiropractic adjustments to the spine ward off not only tennis-related back and neck pain, but also help restore alignment to the limbs, preventing sports injuries in joints throughout the body. After all, it's all connected! In addition, the chiropractic approach to preventing tennis injuries may also include adjustments (or "manipulations") directly to joints in the extremities.

Start With the Spine

Tennis is a high-impact, physically demanding sport that packs a wallop to the entire body — particularly the back. One way players sideline themselves is by arching back too far on a serve. Another way is by bending incorrectly to retrieve errant balls.

Dr. Rorick reminds tennis players to always bend their knees slightly before bending from the waist, on or off the court. The safest way to retrieve a tennis ball is to place it between your heel and tennis racket and lift up.

But the worst thing about tennis — from the chiropractic point of view — is that it builds more muscles on one side of the body, the serving and swing side, than the other.

According to Dr. Rorick, this imbalance pulls unevenly on the spine and can result in a condition known as ***vertebral subluxation***. This common condition occurs when spinal movement is restricted or spinal bones (vertebrae) become misaligned. Doctors of chiropractic correct vertebral subluxations with safe and gentle maneuvers called ***chiropractic adjustments***.

Excellent Elbows

Chiropractic care alleviates common tennis-related elbow problems. Classic "tennis elbow" (known in scientific circles as lateral epicondylitis) is caused by repeated forceful contractions of the wrist muscles on the outer forearm. The result is microscopic tears that lead to inflammation.

Medial elbow pain (medial epicondylitis), often referred to as "golfer's elbow," is caused by forceful, repetitive contractions of the muscles located on the inside of the forearm. Although tennis elbow is the most common elbow injury among tennis players, the sport may also trigger "golfer's elbow."

Research conducted at The University of Queensland in St. Lucia, Australia, reveals that a specific type of chiropractic adjustment to the elbow produces an immediate and dramatic drop in pain for patients with tennis elbow.

As part of the study, researchers tested pain-free grip strength in 24 patients before and after receiving manipulation to the elbow or a placebo procedure.

Findings showed "a significant and substantial increase in pain-free grip strength of 58 percent" during treatment but not during placebo and control (*Man Ther* 2003;6:205-12).

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According to Coleman Bonny, head professional manager for the Montreal Indoor Tennis Club Limited in Montreal, Canada, there are three primary causes of tennis elbow: faulty equipment, faulty technique and overuse. "If the grip on a tennis racket is too small, it makes you hold on too tightly," he says. "If it's too large, it makes your hand strain as well. Both can result in tennis elbow."

Spectacular Shoulders

Shoulders also take a beating during tennis. "The shoulder muscles are small and they're not very strong," explains Peter Lambert, head trainer for the Los Angeles Tennis Club. "What happens is those muscles can't take the load of the tennis ball hitting the racket. Then they get inflamed or the rotator muscle is torn."

There are a number of exercises designed to strengthen shoulders and reduce the chance of injury. Chest presses are perfect for the anterior deltoid, while rowing machines beef up the posterior deltoids. "Anything that you can do to strengthen the integrity of the joint will help," urges Lambert. "The idea is to create anatomical splints with the muscle."

Lambert suggests at least four to six weeks of pre-season exercises. "It's also important that you keep doing these exercises throughout the season. Remember, you are only as strong as your weakest link."

Trauma to the rotator cuff muscles of the shoulder is a common tennis-related problem. The advantage of chiropractic care for rotator cuff injury of the shoulder is its natural, multifaceted approach. Instead of invasive surgery, chiropractors use gentle, safe maneuvers called chiropractic adjustments, combined with specific exercises and physiotherapy, that prove effective in alleviating shoulder pain (*Chiropr Osteopat* 2005;16:20).

One report in the prestigious medical journal *Annals of Internal Medicine* looked at 150 patients with shoulder problems. All patients received standard medical care. Half of the patients also underwent manipulative therapy of the shoulder joint. After 12 weeks, 43 percent of the manipulative therapy group had recovered, compared with only 21 percent of controls. When researchers checked back with the patients after one year, the same difference in recovery rate persisted.

"Manipulative therapy for the shoulder girdle in addition to usual medical care accelerates recovery of shoulder symptoms," conclude the study's authors (*Ann Intern Med* 2004;141:432).

Strong Knees

When the knee joint is out of alignment, as is often the case in tennis-related knee injury, the kneecap (patella) may be thrown slightly off track. One study demonstrated that chiropractic adjustments not only subdue knee pain, but they also help restore proper tracking to the kneecap (*J Manipulative Physiol Ther* 1990;13:539-49).

Another scientific report reviewed a case of knee pain that afflicted a patient for five years. According to the study, chiropractic adjustment of the tibiofibular joint "resulted in immediate and dramatic relief of symptoms." (*J Manipulative Physiol Ther* 1992;15:382-7.)

A third study described a patient with a torn knee meniscus. Menisci are bundles of connective tissue that cushion the inner-knee joint, which may be at risk of tennis-related injury.

The study found that, although three separate medical physicians recommended surgery, the patient chose to try chiropractic intervention first: consisting of adjustments to the knee and homeopathic remedies. The result? A complete resolution of pain and disability (*J Manipulative Physiol Ther* 1994;17:474-84).

Peter Lambert explains that tennis requires a substantial amount of lateral movement — which wreaks havoc on the knees. "All the stopping and starting is particularly damaging."

Lambert said practicing one-legged squats helps strengthen knees. Lateral lunges can also help.

Well-Aligned Ankles

Chiropractic care may help tennis players with ankle sprain return to the court faster, according to a case analysis conducted at the Anglo-European College of Chiropractic, in Boscombe, UK. The study followed a college tennis player with an ankle sprain that was not responding to standard treatment, leaving the player unable to play tennis or compete in tournaments.

After two visits with a doctor of chiropractic who used a soft tissue treatment, "the patient experienced complete resolution of the problem and returned to play without relapse during a 9-month follow-up period." (*J Manipulative Physiol Ther* 2005;28:285.)

In another study of 30 patients with sprained ankles, researchers found that chiropractic ankle adjustments were superior to ultrasound therapy. Adjustments significantly reduced pain and increased ankle range of motion and function (*J Manipulative Physiol Ther* 2001;24:17-24).

Regular Chiropractic Visits

The best way to prevent injuries — on and off the tennis court — is by scheduling regular appointments with your doctor of chiropractic. Regular visits keep your spine and entire body in optimal health.