GOLF AND CHIROPRACTIC: A NATURAL COMBINATION

With summer finally here, less people will be entering your office with injured backs from shoveling snow, slipping on ice or other winter activities. However, millions of Americans are dusting off their golf clubs and hitting the links, a location that is teeming with back pain and potential patients.

There are some 25 million golfers in America. A significant percentage of them suffer with chronic back pain. Many golfers pop aspirin and over-the-counter anti-inflammatory drugs like candy. What about chiropractic care? Surprisingly, as of 1994 the available data suggest that less than two percent of golfers chose to visit a chiropractor.¹ The same source revealed that MDs and PTs treat most golfers. This information is somewhat shocking considering that back pain is the most common problem among golfers.

Although the percentage of golfers who see chiropractors may be higher, it is safe to say that chiropractors have yet to make a significant dent in the golf market. A quick glance at Golf Magazine’s website illustrates this fact. Their fitness section recommends many fitness experts with whom golfers should consult, the majority of which are physical therapists; none are chiropractors (see www.golfonline.com/fitness).

Why golf has seemingly to overlooked chiropractic is unclear. Considering that golfers suffer mainly with spinal nociceptive pain, i.e., mechanical back pain, one would think that DCs would be the caretakers of choice. This article will discuss some of the basic mechanics of the golf swing and suggest some ways that chiropractors can access the golf market.

Swing Myths that Promote Injury

I recently wrote an article that discussed many of the myths associated with modern golf instruction.² One of the biggest myths involves the notion that club head speed at ball impact is dependent on maximum spinal rotation during the backswing. In this regard, the term "x-factor" has been coined to describe the difference (in degrees) between hip position and shoulder position at the top of the backswing. Many instructors advocate this theory and recommend that golfers keep their pelvis as stationary as possible while the spine is maximally rotated. These swing positions are popular because it is believed that maximal spinal rotation somehow engages the "big" muscles of the back, allowing for a sling-shot effect during the downswing, i.e., the modern golf theory of power generation.

With respect to the "big muscle" theory, we are never told how maximal spinal rotation helps to engage spinal muscles or muscles such as the latissimus dorsi. Nonetheless, it is difficult to understand why modern golf instruction would promote such concepts. Regarding spinal muscles, it is known that they provide only five percent of the torque generated during spinal rotation, the abdominal obliques doing nearly all the work.³
Like the spinal muscles, the latissimus dorsi have nothing to do with generating spinal rotation. Nor is maximal spinal rotation necessary for the latissimus dorsi to perform its normal function, i.e., adduction, medial rotation and extension of the humerus.

The true source of power generation in the golf swing involves the creation of elastic energy, which is thought to be the power generator for most athletic maneuvers. Briefly stated, elastic energy is created by imparting a short, quick stretch on the muscles involved in performing a particular movement. In the case of the golf swing, it is generally thought that the rotator cuff, latissimus dorsi and pectoralis major muscles are the "power muscles," as well as the muscles of the arm and forearm. To effectively pre-stretch these muscles, no spinal rotation is needed.

The only purpose for pelvic and spinal rotation in the backswing is to achieve a body position that allows for effective club head delivery at ball impact. There are three main reasons to urge your patients to adopt a short backswing that reduces spinal rotation:

1. A short swing with less spinal rotation gives a golfer more control of the golf club and club head throughout the swing, which translates into better control of the golf ball.

2. Research has demonstrated that short backswings achieved the same clubhead speed at ball impact as long backswings.

3. A short backswing will help to minimize the torsional stress in the lumbar spine.

Watkins explains that golfers should keep their shoulders and pelvis parallel to each other throughout the majority of the golf swing. He calls this rigid parallelization, the loss of which can generate rotational strain in the lumbar spine. With this information in mind, you can imagine how stressful and injurious the golf swing can be when golfers try to achieve a large x-factor. This swing method is dangerous and should be abandoned.

Chiropractic Intervention

There are several avenues of care that chiropractors can offer golfers, including spinal adjustments, preventive swing advice, rehabilitation exercises and anti-inflammatory nutrition. As most DCs know, spinal adjustments are known to be effective in reducing pain and improving spinal mobility. While the adjustment provides these beneficial outcomes, it is important to realize that adjustments cannot prevent injury. For this reason, DCs need to urge their golfing patients to reduce spinal rotation during the swing to lessen the chance of torsional injury. Golfers should be urged to adopt the principle of rigid parallelization throughout the golf swing, which requires rigid abdominal control.

As previously alluded to, an aggressive lumbar spine rehabilitation program should be instituted as both a therapeutic and preventive measure. The golf swing is inherently stressful and injurious to the lumbar spine. Thus, it is very important to make sure the lumbar spine's stabilization mechanism is well trained. Treating golfers without taking this into consideration can lead to reinjury and dependence on passive care. Research has recently demonstrated that lumbar stabilization exercises can reduce pain and...
disability in patients with spinal instability caused by spondylolysis and spondylolisthesis.\(^6\) McGill has recently discussed the stabilizing exercises that impart the least amount of stress on the lumbar spine, which included the cat stretch, curl-ups, isometric horizontal side support, and the quadruped track of exercises.\(^7\) These exercises will also help golfers develop the rigid abdominal control needed to maintain pelvis and shoulder parallelization during the swing to reduce torsional strain.

Nutritional factors should also be considered when treating golfers. As mentioned earlier, golfers commonly self-medicate with aspirin and NSAIDs to help deal with inflammation and pain. These medications are known to cause gastrointestinal ulceration and reduce connective tissue healing. It would be wise for golfers to adopt a diet that is rich in dark green and other colorful vegetables, which are known to be sources of anti-inflammatory omega-3 fatty acids, bioflavonoids and other phytochemicals. Supplementation with omega-3 fatty acids, flavonoids, ginger, turmeric, Boswellia and bromelain can add additional anti-inflammatory support,\(^8\) while supplemental glucosamine and chondroitin sulfate are useful for enhancing the repair of connective tissues.\(^8,9\)

Very few golfers hit the fairways armed with the modest amount of information presented in this article. Even if you do not play golf that should not stop you from engaging the golf market, as golfers desperately need the services provided by chiropractors.

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References


